JPRS 77426

20 February 1981

USSR Report

ECONOMIC AFFAIRS

No. 950

FBIS FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service (NTIS), Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semimonthly by the NTIS, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Indexes to this report (by keyword, author, personal names, title and series) are available through Bell & Howell, Old Mansfield Road, Wooster, Ohio, 44691.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

JPRS 77426

20 February 1981

USSR REPORT

ECONOMIC AFFAIRS

No. 950

CONTENTS

ECONOMIC POLICY, ORGANIZATION AND MANAGEMENT

Bunish Discusses Socialist Economic Management
(P. G. Bunich; IZVESTIYA AKADEMII NAUK SSSR-SERIYA EKONOMICHESKAYA, Nov-Dec 80) 1

Gosplan Official Urges Better Cost, Incentive Guidelines
(S. Osadchenko; PLANOVOYE KHOZOYAYSTVO, Nov 80) 16

UTILIZATION OF RESOURCES AND SUPPLY

Trends in Statistical Control of Supply Detailed
(F. Kravchenko, M. Daragan; VESTNIK STATISTIKI, Nov 80) ... 27

ECONOMIC MODELING AND COMPUTER TECHNOLOGY APPLICATION

Glushkov, Associate Discuss Computer Use Problems
(V. Glushkov, Yu. Kanygin; EKONOMICHESKAYA GAZETA, Dec 80) 35

REGIONAL DEVELOPMENT

Lithuanian Party Official Discusses Republic's Economy
(P. Grishkyavichus; PLANOVOYE KHOZYAYSTVO, Nov 80) 39

Conference on Kirghiz Territorial Production Complexes
(G. Kopanev, et al.; PLANOVOYE KHOZYAYSTVO, Nov 80) 51

INTRODUCTION OF NEW TECHNOLOGY

Financial Stimulus To Promote Technical Progress Cited
(T. Nazarov; EKONOMICHESKIYE NAUKI, Nov 80) 54

BUNICH DISCUSSES SOCIALIST ECONOMIC MANAGEMENT

Moscow IZVESTIYA AKADEMII NAUK SSSR-SERIYA EKONOMICHESKAYA in Russian No 6, Nov-Dec 80 pp 21-33

/Article by P. G. Bunich: "The Structure of the Economic Mechanism of Management Under Socialism"/

/Text/ This article examines the fundamental principles of structure of the economic mechanism of management of the economy of a developed socialist society--in terms of reproduction stages, levels of branch management, program and territory. It gives a description of the subsystems of the plan, incentives and management of science and technology, the development of new territories, demography, ecology, foreign economic relations and so forth. The relationship between the common and the particular in the economic mechanism of socialist countries is analyzed.

The development of the structure of the economic mechanism of management of the socialist economy, which discloses functional support subsystems, blocks, elements, microelements and "elementary particles" in terms of stages of the reproduction process and, within stages, according to the levels of branch management and overall programs as well as in the territorial aspect, is of great importance for a description of this mechanism and for ranking the parts forming it. This is necessary both on the scientific plane and for economic practice and educational purposes.

The problem of structurization of the economic mechanism of management of the socialist economy pertains to little-investigated problems. Under these conditions the attempt made to examine this problem is particularly research oriented and its task is not so much to find final diagrams as to set forth the possible principles of their construction.

The achievements of our country, where a developed socialist society has been built and the advantages of socialism are being realized most fully, have been taken as the basis for the concept of the structure of the economic mechanism of socialism. Other socialist countries, having reached the stage of developed socialism, will lean on the experience accumulated in the USSR.

At the same time, in some socialist countries and at some stages of development the mechanism of economic management has its specific nature within certain limits. For example, centralization and independence develop more or less depending on the relationship between intensive and extensive growth factors, the complexity and dynamic nature of the economy and the domestic and foreign political situation. The differences in the extent of supply of commercially available minerals, spectrum of climatic zones of development of agriculture and other branches, natural ways of communication and location, traditions of production of a specific product, scale of its output and foreign trade, territorial concentration of the economy and population, specific nature of multinational states and so forth are reflected in the mechanism of management in socialist countries. For example, comparatively small countries enter the international division of labor to an intensified degree, primarily within the framework of the socialist camp.[1] Multinational socialist states implement a special national economic policy and so forth.

In socialist countries with insufficient natural raw material resources capital-, labor- and science-intensive industries are developed. When there is a shortage of manpower, capital- and materials-intensive industries are promoted. In the absence of cheap means of communication comparatively small science-intensive articles are produced. When there is an energy shortage, branches with a minimal energy component are developed. In countries where there is fertile land and sufficient moisture powerful agricultural complexes are formed.

In addition to the differences in natural and climatic conditions, sizes of the economy and other above-mentioned factors the stage of development of socialism has an effect on the economic mechanism of some socialist countries. In this sense the economic mechanism of even one socialist country, if it is considered in dynamics and in historical terms, has its own specific nature at every stage. For example, in the USSR the stage of war communism was characterized by a high centralization of management, curtailment of financial incentives and so forth. The New Economic Policy gave rise to the idea of building a new society "not directly on enthusiasm, but with the help of enthusiasm born by the great revolution, on personal interest and on personal incentives."[2] One of the characteristics of the New Economic Policy consisted in the use of economic means of regulation and exclusion of capital and in the regulation of small commodity production and its transformation into socialist production.

Finally, the differences in the economic mechanisms of various socialist countries reflect the specific nature of political and economic concepts.

By and large the differences in the economic mechanism of various socialist countries and in some stages of socialist development do not concern its basic qualitative characteristics, "large block structures" and strategic objectives and means, but detailed parameters, quantitative values and tactical, current forms and methods of management, that is, elements closest to the surface of mechanisms noted for mobility, variability and diversity.

The peculiarity of the subjective economic instruments used on the basis of objective categories is even greater. For example, let us mention the use of deductions from the profit and later its disposable balance in the USSR. Guaranteed payments to the state budget are now used. In a number of socialist countries a capital use charge was imposed. Now its range has been narrowed considerably. Both the spheres of operation and methods of levying the turnover tax differ. The practice of the USSR and some other socialist countries recognizes such instruments as accounting prices, taxes on individually reckoned wages, coefficients of the permissible nonfulfillment of a contractual products list, special standards of incentives for the fulfillment of counterplans and so forth.

It is advisable to take into account all the enumerated characteristics not in the form of new structural formations, but in their modifications and in the change in the "weights" of various relations. This is determined by the compensating capabilities of the economic mechanism, which to certain limits ensure its operation when some subsystems are weakened (absent), through an accelerated development of others. For example, insufficiently stimulating forms of remuneration for labor can be compensated by the labor activity of the masses. If elements of centralization are intensified in the economy, all things being equal multistage organizational structures of management with expanded functions appear. The lowering of prices "is corrected" by an expansion of the sphere of direct allocated distribution of goods and the imperfection of long-term planning is mitigated by an increase in operative correcting intervention. In practice, there are various organizational forms of production having "clearance" from the optimum regime for certain deviations from it, in which the system does not destroy itself. The shortage of some types of products is compensated, as it were, by an above-standard consumption of others and so forth.

Let us now examine the specific structure of the economic mechanism of management of the economy of developed socialism. Three groups of subsystems are placed "horizontally:" 1) general functional subsystems, 2) special functional subsystems and 3) support subsystems. The first group includes the subsystems of the plan; incentives, sanctions and responsibility; real-time management; socialist competition and so forth. The second group supplements the first, that is, special mechanisms necessary for the intensification or weakening of certain processes "insert" special functional subsystems into general functional subsystems. For example, by means of special subsystems technical progress and demographic growth are accelerated and the differentiation of the income of various population groups, shortage of resources and output and so forth are weakened. At the same time, intensification of one process presupposes the weakening of others. In particular, acceleration of technical progress is accompanied by a weakening of the reduction of the income of enterprises during the output of new products and decrease in the differentiation of income is effected by an increase in real income with respect to population sections receiving low pay.

The need for the correcting effects of special subsystems on general subsystems is often due to "critical," "transitional" situations; for example, the beginning of the mastering of new technology or replacement of the output of old articles with new ones; the specific nature of some stages in the country's development (industrialization, war time conditions and so forth). It is precisely in these critical situations that general functional subsystems are inflexible and urgently "call" a number of special subsystems "for help." In particular, this is characteristic of the "relationships" between general subsystems with the science and technology subsystem, which includes the block for the development and mastering of fundamentally new complex equipment, whose development causes great expenditures and leads to a big "elimination" of inefficient variants and to expenses on improvements and changes. The same should also be said about the renewal of output in general. Only the most improved new articles or those that meet the needs to the greatest extent are retained in production for a long time.

The third group--support subsystems--constitutes a special group. They "service" the basic and special subsystems, as well as their entire combination, by means of several subsystems. Let us examine them.

The methodological support subsystem includes the development of the theory and models of the economic mechanism of management and of all the relations within the framework of these models. An overall development of the entire economic mechanism is also carried out by means of this subsystem (all the other subsystems also make improvements of a local nature).

The organizational support (or management organization) subsystem has as its target function the adoption of decisions and organization of their introduction into practice, including control over the course of fulfillment and evaluation of results. The following are the distinctive conditions for its implementation: establishment of hierarchic structures of management bodies (separately for linear and functional services, because their number does not always coincide in the levels of management); determination of the necessary links at every level of management and their powers; development of official instructions for each subdivision and worker with due regard for the principle of uniqueness of the basis for any function and norms of management, control spheres and extent of responsibility, including economic responsibility; formation of interrelationships both along vertical and horizontal lines with due regard for the interfacing of the "output" of one subdivision with the "input" of another; provision of the proper flexibility of management (in particular, operative independence and adaptiveness to the necessary changes; determination of the permissible limits of indefiniteness of parameters and of the sequence and length of operations and so forth); development of the zones of application of formal and informal methods and standard and nonstandard procedures (including procedures for singling out subdivisions responsible for the preparation of decisions and other participants in this work, rules of coordination and forms of documents); distribution of spheres of management from the standpoint of one-man or collective management and so forth.

The organization of management forms part of support subsystems, because it must be subordinated to the essential principles and profound needs of the economic mechanism and not develop independently, autonomously. "The nature of organization of any institution naturally and inevitably is determined by the content of activity of this institution,"[3] V. I. Lenin pointed out. At the same time, the dependence of the organization of production relations on the profound and essential processes of the economy does not transform it into a superstructural form. This phenomenon is of a basic nature, which is inherently characteristic of production relations of the concluding, not the initial type. The organization of production relations serves to ensure a regulated state of the system and thereby to activate it. It coordinates the management aspect of the economic system and itself needs management. The superstructure only purposefully gets to know, formulates and legalizes the necessary organization.

The management information subsystem supplies all the others with information flows. Software and other blocks perform a service role within this subsystem. The personnel support subsystem encompasses the selection, training, retraining and placement of all managerial personnel. The subsystem for material support for management makes it possible to equip the subsystems of the economic mechanism with material means of economic management, that is, automated management systems, control systems, teletypes, industrial remote installations, small office equipment and so forth. The financial support subsystem accumulates and distributes funds in accordance with the needs for resources (material, labor, information and so forth) of all the subsystems of management activity. The legal support subsystem provides the set of legal norms and rules necessary for the operation of the entire management mechanism. It also includes the system of arbitration, which resolves disputes and performs preventive work.

Material and information support is unified within the framework of automated management systems more and more often. This results from the fact that only by means of automated management systems is it possible to gather vast data arrays, to do this rapidly, "to enrich information ore up to a concentrate," to ensure, if needed, the translation of information into the necessary language, to distribute it to the proper quarter, to scan the data according to the inquiry (request) and to issue orders for execution.[4]

The integration of material-information and organizational subsystems also occurs. In the complex and rapid change of situations characteristic of the modern economy man at times--and it will be even more so in the future--is unable to sort out all the possible variants and to promptly make the optimum decision. Powerful and high-speed hardware, this unique "artificial intellect," which gives the true intellect sorted out information systematized according to the given criteria, is transformed into an integral element of direct organizational activity.[5] In addition to this, it should be taken into account that the manager called upon to consider and make decisions gets tired and loses his maximum thinking power quite quickly, while the machine does not know exhaustion and is always capable of the maximum load.

Let us examine the content of some general functional subsystems. The plan subsystem is the core of national economic management and the main instrument of implementation of the economic policy of the CPSU. Speaking about the State Commission for the Electrification of Russia, V. I. Lenin called it the second party program.

The plan creates the "framework" for the entire "social engineering" of socialism and for all the aspects of the economic mechanism of its management--functional, linear, reproduction, territorial, program and support aspects.

The plan subsystem can be divided into blocks. The first is a forecast, which in turn is detailed according to the following types of forecasts: science and technology, social, demographic, natural resources, foreign political, military-strategic and overall economic (as soon as the economy was reflected in all the preceding forecasts). Each forecast is based on a number of stages (analysis of the initial level and study of social needs) and ends with several variants calculated, as a rule, for 15 to 20 years. The development of forecasts increases the number of possible alternatives of development examined at the preplan stage for the purpose of selecting the best. Thereby, forecasts make it possible to come closer to the optimum strategy.

Just as planned economic management provides the tasks set with the appropriate assignments for production and with the policy of distribution of resources, so forecasting under socialism can and should be based on the forecasting of normative-purposeful end results and not on extrapolation (even with corrections for certain assumed changes), as is characteristic of forecasting under capitalism.

The second block is the block of the long-term plan. It differs from the first by uniqueness (one out of many forecast variants considered the best is assumed as the basis for the plan). An overall program for scientific and technical progress developed for 20 years supplemented and refined once in 5 years for the next 20-year period is the initial point of the long-term plan. Next there are the basic trends in the long-term plan developed for 10 years supplemented and refined upon the expiration of the first 5-year period in terms of the next 10 years. For the first 5 years the basic trends are developed according to years and for the second 5 years they are established only for the end of the five-year plan or for all the years combined; for example, according to capital investments. The number of assignments is greater than in a forecast, but smaller than in the average-term plan. Draft plans for 10 years do not have such a directive nature as five-year plans. The period of operation of basic trends is established on the basis of the fact that the attainment of the most important goals of society requires approximately 10 years.

The basic trends in the long-term plan are used for the development of the average-term (five-year) plan--the main form of planning the country's economic and social development and the basis for the organization of economic activity. The average-term plan has more indicators than the long-term plan and is developed on the basis of the standards of utilization of live and embodied labor, by means of which planned balances of production capacities, material resources, labor and so forth are compiled for a comparatively wide range of items. The balanced nature of the plan also envisages its detailed financial and credit security and the calculation of prices corresponding with planned proportions. The plan indicators are subdivided into directive and accounting.

Directive indicators are obligatory both for fulfillment and reporting. Accounting indicators are needed for presentation on demand to superior links (often for statistical reporting as well) with a view to checking the substantiation of draft plans proceeding from below and analyzing reserves in the course of fulfillment of the approved directives.[6]

In the plan subsystem the financial plan is singled out especially: It is systematically subdivided into the consolidated financial plan; consolidated calculations (according to basic indicators) of the USSR state budget, calculations of credits and financial plans of the Main Administration for State Insurance, the Administration for Foreign Insurance and the State Workers' Savings Bank; the balance of payments and the balance of the population's monetary income and expenditure; balances of income and expenditure of branch ministries, state associations and enterprises; estimates of state organizations and institutions; financial plans of cooperatives and public organizations. The financial plans of branches and enterprises are connected with central and consolidated financial plans both within the framework of payments and allocations (credits and so forth).

The average-term plan is developed and realized in annual terms. Its current plan is formed in conformity with every year and contains a more detailed list of products in physical terms and specifies and in some cases refines the assignments as compared with the five-year plan. Actual progress plans are developed on the basis of the current plan.

The subsystem "incentives, sanctions and responsibility" is aimed at ensuring the fulfillment of plans and, at the same time, actively contributes to their formation by creating interest on the part of collectives in adopting optimally stepped-up assignments. If a new plan sets new goals and aims at the attainment of new proportions, this subsystem is also reorganized. It has two main blocks, that is, the block of material incentives, sanctions and financial responsibility; the block of social and spiritual incentives and social responsibility. The former includes the system of cost accounting relations, which in turn provides for the use of prices, distribution of proceeds from the sale of output to the replacement fund, the wage fund and the accumulation fund.

The replacement fund is used to make up for circulating capital and to restore fixed capital (at the same time, part of the depreciation for renovation is transferred to the production development fund). The wage fund includes salaries and the material incentive fund.[7] Profit is assigned for payments to society, production development and other purposes.

The subsystem's sanctions include, in particular, price reductions; lowering the wages of workers and employees for idle time and rejects through their fault; depriving managers and engineering and technical personnel guilty of the output of poor-quality products of bonuses; higher rates on loans for covering the shortage of internal circulating capital and for a delay in the return of credits; fines for a breach of contracts, for damage done to the environment and so forth.

The relationships among the components of the subsystem examined envisage the transfer of the savings on the wage fund to the material incentive fund and compensation for the overexpenditure of the wage fund from the material incentive fund (within the limits of the savings on the wage fund previously entered in the material incentive fund). Of course, there are many more such relationships in the subsystem than mentioned.[8]

The block of social and spiritual incentives and social responsibility includes moral incentives, meeting the workers' spiritual and social needs (for example, participation in management, socialist competition, political life and so forth), a system of ideological levers, measures accelerating the transformation of labor into a need, psychological and educational methods aimed at the formation of people's sentiments and inclinations toward public interests and party disciplinary, administrative, civil and moral-ethical responsibility.

The real-time management subsystem[9] includes the following blocks: technical control--check on the correspondence of the quality of output to the standards or specifications envisaged by the plan and contract; economic control--check on the fulfillment of plans and uncovering of reserves; financial control--check on financial discipline and other spheres of activity;[10] economic analysis (operative, accounting and statistical); current administrative economic management of production; financing; extension of credit; material and technical supply; current price formation and so forth; study of new situations on the basis of independence of various management links, maneuvering of reserves (labor, material, financial, credit and currency reserves) and correction of planned assignments in the necessary (strictly limited) cases.

Let us discuss the characteristics of special functional subsystems, primarily the subsystem of management of scientific and technological development. The progress of science and technology is based on general functional subsystems. The socialist economy creates conditions for the development of science and technology through the usual planning, cost accounting and managerial activity of collectives. If the basic subsystems "are not connected" to the development of science and technology, it proceeds at slowed down rates and on a reduced scale.

At the same time, in the sphere of scientific and technological development there are areas where ordinary planning and cost-accounting self-financing are not sufficient or are not applicable at all. It is primarily a question of fundamental research, which is mostly financed from the state budget (scientific institutions of academic specialization and studies conducted by scientific subdivisions subordinated to functional ministries and departments and to branch ministries and departments, where along with applied research fundamental research is also often conducted), as well as the development of fundamentally new types of complex output. For example, the development of space shuttle equipment, fast-neutron atomic reactors and new types of machine tools, switch to new types of transport facilities, output of next generations of integrated-circuit computers and production of holographic motion pictures, mechanical robots, mass laser equipment and so forth can be singled out.

The production of facilities giving an effect not to the manufacturing enterprise and one consumer, but successively to a whole group of consumers for whom the testing of new equipment by the first consumer is a distinctive common proving ground, requires specific stimulation.

There are technical facilities (their proportion is growing) which ensure a social, not economic, effect; for example, they enhance the creative content of labor, save customers' time on the purchase of goods in stores and so forth. The budget financing of the indicated facilities and intrabranch redistribution of resources from the single fund for the development of science and technology are developed quite widely.

To finance inventors and rationalizers, not only the additional economic effect but budgetary allocations as well are used, in particular, for remuneration and to cover the expenditures on the introduction of inventions and rationalization proposals not yielding savings, but giving another important effect. It should also be kept in mind that a gap appears between a single (final) effect from inventions and repeated intermediate stimulation and it requires special methods of financing inherent in this subsystem in contrast to general functional subsystems. However, just as not the entire assumed effect but its comparatively small share is spent on incentives, so, even being repeated several times, incentives do not exceed the effect.

In connection with the noncoincidence of incentives and their effect, centralized funds are formed in ministries and bonuses are paid from them to the authors of inventions. The periods of payment of rewards and their scales differentiated depending on the effect and maximum amounts are regulated by special rules. As an experiment enterprises in the Latvian SSR and in Gor'kovskaya and Sverdlovskaya Oblasts transfer part of the effect from the introduction of inventions and rationalization proposals to the Administration for the Protection of Inventors' Rights under the USSR State Committee for Inventions and Discoveries. This part forms the fund for a centralized payment of rewards to inventors for the introduction of their projects into all enterprises.

A successful development of science and technology requires reserves calculated with due regard for the significant indefiniteness of the needs of science, flexible indicators of the plan of consumers reflecting the stochastic factor in scientific output, special methods of calculating circulating capital and specific prices for scientific developments of an individual nature. The appropriate reserves should be created for a successful development of science and technology. Apparently, some branches can use the right of accelerated depreciation of fixed capital. Such are some spheres of management of science and technology forming part of the special functional subsystem.

Control of the quality of output is another special functional subsystem. It includes such components as certification of output, quality control systems, introduction of overall and individual quality indicators, price and wage increases for quality, organization of a competition for the attainment of high-quality indicators and use of the State Badge of Quality for the purpose of encouraging the output of articles meeting the level of world achievements.

The subsystem of management of the development of new territories and previously economically backward regions is an important special functional subsystem. It includes measures for attracting and retaining working personnel, benefits for the acquisition of material resources and the functioning of enterprises, resources granted for an accelerated development, special reserves and other protectionist actions. The development of regions in the North, Siberia and the Far East can be mentioned as an example of the development of new territories.

The creation of the necessary housing conditions, organization of supply and of cultural services and labor protection are important among the measures for enlisting and retaining labor resources. Benefits for the acquisition of material resources and the functioning of enterprises (with due regard for higher wages) include a temporary reduction in efficiency standards, reduction in the standards of the capital use charge, issue of cheap credits, subsidy and so forth.

The national economic policy subsystem is based on the consideration of the specific characteristics of every nation and nationality. It ensures an accelerated development of previously economically and culturally backward nationalities.

The demography management subsystem introduces changes into demographic processes as compared with the conditions created by general subsystems and by the special subsystem of social normatives of the standard of living (wages and bonuses, as well as public consumption funds forming part of them).

The demography management subsystem envisages measures stimulating an increase in the birth rate and improvement in children's living conditions. Special industries dealing with the output of goods for children at preferential prices are formed and food products for children are produced. The output of articles for children is planned in an individual line. An additional output of goods for children in excess of the assignments approved for production associations for the corresponding year in the five-year plan is stimulated by deductions into incentive funds at the rate of up to 5 percent of the cost of the additional output of these goods, but no less than 10 percent of the sizes of these funds according to the plan for a given year. Higher fine sanctions are imposed for a breach of contractual obligations for the deliveries of goods of children's assortment as compared with their magnitudes for the underdelivery of other goods.

The ecology management subsystem is one of the important special subsystems. From the economic point of view both the "overexploitation" of resources and their nonutilization are harmful. The former undermines the future expanded reproduction of forests, land, water and other reproducible resources and the latter results in their partial destruction (and, moreover, without any benefit for man).

Extraction of all efficiently mined resources from the depths of the earth and a correct utilization of fertile land, forest resources and so forth can and should be stimulated by rent payments. For the purpose of avoiding environmental pollution,[11] ensuring the protection of the soil cover and rationalizing the norms of extraction of resources with due regard for the interests of future generations it is also possible to utilize a system of sanctions. Thus, if some branch "overexploits" resources, it should make up for the possible future losses of society or cover the losses of the branch that suffered. For example, timber rafting is profitable for timber extractors, but it does damage to fishing, impairs the hydrological conditions of rivers and causes great losses for agricultural production. Imposition of sanctions on timber extractors in favor of the branches that suffered will not enable timber extracting enterprises to obtain income in connection with the damage done by them.

Society takes active measures to improve the environment (providing a certain amount of additional precipitation, dispersing small clouds, reducing hail damage to a limited extent and so forth).[12] As a rule, the effect covers and exceeds the expenditures on the implementation of similar measures. In the future such an effect on the environment will be on a greater scale.

All the above-mentioned levers (rent, sanctions, investments in cleaning installations and so forth) operate within the framework of the general functional subsystems of the plan and incentives. However, there are areas of anthropogenic activity that require a special ecology management subsystem. For example, they include preserving nature from the standpoint of man's habitat and ensuring, from this point of view, the necessary quality of the atmosphere, water (including for recreational purposes), soil cover and plant and animal world. In particular, the importance of the preservation of a sufficient volume of oxygen in the atmosphere increases. If limits of its consumption are not established, in time, as production grows everywhere, the oxygen balance can be disturbed.

Acute problems also exist in the area of control of the purity of water resources, especially if we take into account that atmospheric and water pollution permitted in one place also spreads to other places. Furthermore, a high quality of the atmosphere, water, soil, flora and fauna separately is a condition for the proper quality of all these spheres, because they are connected by a single cycle of substances. For example, soil pollution leads to a deterioration of water, flora and fauna and to a disturbance in the optimum atmospheric composition. Damage to and reduction of forests are fraught with the washing out of river banks (weakening of the water protective function of forests), soil erosion (weakening of the antierosion function), deterioration in climate control and decrease in the efficiency of sanitary-hygienic and health improving functions.

To ensure and maintain the proper ecology, society observes the state of ecological parameters (monitoring), develops and changes the standards of the maximum permissible discharge and disposal of impurities, specifies the rules of concentration of the distribution of the population, plans for the distribution of productive forces and hunting conditions and develops overall schemes for the protection of nature. It directs planners and industrial and other enterprises to the production of products that minimally pollute nature (in particular, this applies to the set and composition of fertilizers) and meet the nature saving trend of production (saving water and so on) and so forth. Ultimately, the development of completely drainage-free (circulating) technology and completely waste-free industries can prove to be useful.

The ecology management subsystem also includes the establishment of zones where the use of resources is forbidden or limited. In particular, such zones include Lake Baykal, where 80 percent of the fresh water reserves of the USSR (20 percent of the whole world) are concentrated and the world of internal inhabitants is unique. Water protective prohibited forest zones along the banks of water facilities are introduced. Antierosion forests, forests for the sanitary protection of water supply sources and health resorts, green zones around settlements and enterprises, natural zoological and dendrological parks, botanical gardens, forest parks, subalpine forests and so forth are protected especially.

The ecology management subsystem includes the establishment of norms for the consumption of resources, without which society cannot exist (renewable and nonrenewable--fuel, water, timber and so forth), and the introduction of rules of recultivation of places of depleted natural resources, as well as land plots, where geological survey, prospecting, geodetic and archeological work was carried out.

The ecology management subsystem includes the appropriate financial and economic levers; for example, budget financing for nature protection measures. During the current five-year plan centralized capital investments for this purpose will total 11 billion rubles. Industrial enterprises, kolkhozes and sovkhozes spent considerable resources on these purposes (from the funds available to them).[13]

The subsystem for the management of foreign economic relations, which are based on general functional subsystems to an ever greater extent, takes on ever greater importance. The calculation of objective rates of exchange of Soviet currency into foreign currency, sale (purchase) of licenses, including patent licenses, introduction of unified standards for the development of international cooperation and subsequent uniform servicing of equipment in all countries, trade at the prices of the world market, interstate migration of manpower, including border migrations, use of sanctions[14] and so forth--as a rule, all this takes place within the framework of general subsystems of the economic mechanism of management.

Other areas of management of foreign economic relations are singled out into a special subsystem, which encompasses additional export and import rules (export and import quotas, customs rules, coastal trade conditions, quotas of imported currency, procedure for its use and so forth). It includes measures for the stimulation of export, that is, export subsidies, grants for materials for the export of products, preferential loans, including currency loans, measures for incentives for an increase in the scale and efficiency of export[15] and regulation of conditions for the transfer of manpower in order to avoid the negative consequences of this process.

Foreign economic relations between the USSR and other socialist countries deserve a special heading. In 1979 the proportion of socialist states in the foreign trade turnover of the USSR exceeded 56 percent.[16] More than 2,200 enterprises were, are being and will be built in CEMA countries with USSR assistance.[17] Of them 1,224 enterprises and projects were fully built and put into operation on 1 January 1978.[18]

There are enterprises that are owned jointly by a number of socialist countries. The formation of prices of products sold among CEMA members has a number of characteristics protecting them from the sharp fluctuations in the price level and rapid inflation typical of the spontaneous world market. The subsystem of management of foreign economic relations should also envisage special reserve funds, which are to compensate for a change in the conditions and prices at the spontaneous market, which in a number of cases are very significant. Therefore, it is important to plan the domestic economy so that its export goods could be utilized for internal consumption or would meet the needs of other acceptable foreign partners. As a rule, finished articles and materials are more suitable for this than parts, subassemblies and units, which it is difficult to "redistribute" urgently. If, however, there are slumps in import, to overcome them it is important to have "overinsured" articles of internal production or back-up importers. While importing foreign technology in necessary cases, at the same time, we must not give up our own scientific and technical research in this field, keeping in mind both the need for "added insurance" in case of possible slumps and the attainment of higher scientific levels, as well as the possibility of obtaining scientific results for allied branches of knowledge interwoven with this sphere.

FOOTNOTES

1. The differences, for example, in the sphere of foreign trade can be judged by the data on the ratio of export to the national income, which comprised about 30 percent in the People's Republic of Bulgaria, 34 percent in the Hungarian People's Republic and 25 percent in the German Democratic Republic and the Czechoslovak Socialist Republic (see "Sovershenstvovaniye Upravleniya Ekonomikoy Stran SEV: na Primere NRB, VNR, GDR, PNR, SRR i ChSSR" /Improvement in the Management of the Economy of CEMA Countries as Illustrated by the People's Republic of Bulgaria, the Hungarian People's Republic, the German Democratic Republic, the Polish People's Republic, the Socialist Republic of Romania and the Czechoslovak Socialist Republic/, edited by R. N. Yevstigneyev, Moscow, Nauka, 1974, p 280).

2. Lenin, V. I., "Poln. Sobr. Soch." /Complete Works/, Vol 44, p 151.

3. Lenin, V. I., "Poln. Sobr. Soch.," Vol 6, p 99.

4. Approximately 600,000 periodicals are published throughout the world every year. The number of scientific and technical journals alone is about 54,000. A total of 2 million articles are published in them annually. Furthermore, books and informal scientific communication channels give a great deal of information. In order to promptly know about the achievements of colleagues and not waste effort on the solution of a problem that has already been solved, it is necessary to transfer scientific information to a modern technical base, which includes the development of standards for the presentation of information, remote transmission of data, use of computers and so forth.

5. For example, the computer center of the Main Administration of Motor Transport of the Moscow City Executive Committee issues assignments and routes, which are a control command proceeding from machines, not from man, to many drivers every day. There is an ever greater number of such control commands of automated systems.

6. Accounting indicators are approved by enterprises, but they are not identical to the function and composition of independently approved indicators, which reflect the extension of rights in the localities and are developed for their needs, not for management links like accounting indicators.

7. In order to obtain the size of this fund as a whole, it is necessary to subtract from nominal wages taxes and payments for state insurance (to add payments to it) and the transfer of temporarily free capital of workers to savings banks (with an addition of the capital received from there and so forth).

8. There are also relationships between general and special subsystems. For example, bonuses based on the results of activity for managers and engineering and technical personnel are reduced when the plan for new technology is not fulfilled, which reflects the effect of the special functional subsystem on the general subsystem.

9. The subsystem is called "real-time management," not operative or current management. This is connected with the fact that in legal practice operative management reflects the right of an economic link to use the property assigned to it without the right of ownership. Current management by analogy with current planning is considered management in terms of a year. We are talking about shorter-term management--in real time.

10. Control is carried out by various levels of branch management (technical control divisions, quality inspectorates, local planning, financial, accounting and legal services and economic planning, financial and auditing administrations of industrial associations, ministries and so forth), customer services (their representatives in production, trade inspectorates and so forth), party organizations, people's control bodies, centralized functional services--planning, financial and bank, supply, construction, statistical and others--(the latter includes control of the State Committee on Prices, the State Committee for Labor and Wages, the State Committee for Forestry, the State Committee for Standards, the State Committee for Hydrometeorology and Environmental Control, the State Committee for Supervision of Industrial Safety and for Mining Inspection, the Ministry of Fish Industry, the Ministry of Health, the Ministry of Geology, the Ministry of Land Reclamation and Water Resources, the Ministry of Chemical and Petroleum Machine Building, the State Inspectorate for Quality of Export Goods of the system of the USSR Ministry of Foreign Trade and so forth), executive committees of soviets of people's deputies and so forth.

11. By pollution we mean an excess of the content of harmful substances in the environment over the norms of their maximum permissible concentrations. Waste (the overwhelming part of the volume of initial raw materials), which is fully controlled and, therefore, does not do damage to the environment, differs from pollution. In this sense the burial of "waste," when it impairs the environment, is, in fact, the burial of pollution.

12. In particular, there are antihail services equipped with installations for the launching of meteorological rockets (PRAVDA, 9 April 1979).

13. PRAVDA, 29 November 1979.

14. Incommensurability of sanctions with the benefits from their violation gives rise to a lack of discipline, insufficient confidence in economic relations and accumulation of surplus production stocks. A decision of the CEMA Executive Committee secured an agreement among CEMA members to the effect that it is necessary to increase sanctions to a level that will make a breach of agreements confirmed in international economic treaties and contracts economically unprofitable (see "Sovershenstvovaniye Upravleniya Ekonomikoy Stran SEV," pp 330-331).

15. For example, in the USSR the higher the ratio of earnings in foreign currency rubles to the internal wholesale price (with due regard for the expenditures on export or tropic execution) at an enterprise, the greater the standards of deductions into economic incentive funds. Thus, the interest of exporting enterprises in maximizing earnings at the foreign market, improving and renewing output and minimizing expenditures on manufacture is activated.

16. "SSSR v Tsifrakh v 1979 Godu" [The USSR in Figures in 1979], Moscow, Statistika, 1980, p 53.

17. PRAVDA, 16 April 1979.

18. "Effektivnost' Sotsialisticheskogo Proizvodstva i Khozyaystvennyy Mekhanizm" [Efficiency of Socialist Production and the Economic Mechanism], edited by K. I. Mikul'skiy, Moscow, Nauka, 1979, p 367.

COPYRIGHT: Izdatel'stvo "Nauka", "Izvestiya AN SSSR, seriya ekonomicheskaya", 1980

11,439
CSO: 1820

ECONOMIC POLICY, ORGANIZATION, AND MANAGEMENT

GOSPLAN OFFICIAL URGES BETTER COST, INCENTIVE GUIDELINES

Moscow PLANOVOYE KHOZOYAYSTVO in Russian No 11, Nov 80 pp 42-50

[Article by S. Osadchenko, subsection chief, USSR Gosplan: "Increasing the Role of Cost Accounting and Economic Incentives"]

[Text] The decree of the CPSU Central Committee and the USSR Council of Ministers concerning the improvement of the economic mechanism provides for the organic unity of planning and cost accounting [*khozraschet*] at all levels of control of industry.

The basis of the development of cost accounting in the branches and associations and at enterprises of industry is provided by the assignments for the five-year plans, with breakdown by individual years, and the long-term economic norm lists -- norms f r the destribution of profit, the formation of assets, for economic incentives, the wage fund, the single fund for the development of science and technology, etc. An entire complex of organizational economic measures is aimed at the attainment of high final national-economic results. These include economic levers and incentives -- profit, price, credit, etc. -- which have been called upon to intensify the self-interestedness and responsibility of the ministries, associations, and enterprises for the realization of those results.

Economic experiments that have been carried out in a number of industrial branches have convincingly shown the necessity of improving the planning methods and of increasing the role of cost accounting and economic levers and incentives. For example, in the Ministry of Instrument Making, Automation Equipment, and Control Systems, on the basis of the five-year plan, with breakdown by individual years, a cost-accounting mechnism for administering the branch was worked out, with the expansion of the rights of the ministries in the area of planning and financing, and with the use of long-term economic norms for the distribution of profit and the determination of the overall wage fund. In the electrical engineering industry an economic experiment was conducted to introduce new methods of planning, financing, and the providing of economic incentives for scientific-technical progress. Economic levers and incentives in accelerating the creation and assimilation of production entities producing new and more effective technology were widely used.

On the basis of the accumulated experience, a single comprehensive system was developed for the new conditions of planning and economic incentives for industrial production, and that system has been experimentally tested in Mintyazhmash, Minsel'khozmash, Minenergomash, Minpribor, and Minelektrotekhprom. Their experience of many years was studied and generalized, and found its expression in the basic trends for the further improvement of the economic mechanism in industry and capital construction.

The orientation of the economic mechanism upon the attaining of high final results in work has required the improvement of the system of the approved and estimated indicators, and, on their basis, the further development of cost accounting and the intensification of the economic levers and incentives.

A very important link in improving the economic mechanism is the system of profit planning and distribution. Profit is the source of socialist accumulation and the formation of state-wide financial resources. In profit one sees reflected the results of the production-economic activities of the enterprises and associations. Therefore the comprehensive accounting of the interaction among the plan, the incentives, and the system of profit distribution serves as the organizing basis of cost accounting in the branches (ministries), associations, and enterprises. The action of the principles of cost accounting (comparability of income and expenses; profitability and self-financing; material self-interestedness; economic responsibility and monitoring of the ruble) manifests itself in the process of the circulation of the monetary means of the cost-accounting links.

Let us consider the basic trends for improving individual elements of cost accounting in the industrial branches -- the distribution of the profit on the basis of norms; providing of expanded reproduction, and the development of science and technology, with their own financial resources; the formation of economic incentive funds; and the procedure of interrelations between the branch and the budget.

The system of financial planning and distribution of profit in industry is based on the allocation of budgetary appropriations to cover the expenses of the branch in financing capital investments, scientific-research and experimental-design operations, in maintaining educational institutions, children's institutions, and other planned expenditures. At the same time when they receive these appropriations, the ministries, or, rather, their associations (enterprises) and organizations, in addition to paying for the production assets and fixed payments, send to the budget the uncommitted balance of profit, which, in individual branches, considerably exceeds the budgetary appropriations.

Thus, at the present time there is in operation a system of counter financing, with which the branches (enterprises), on the one hand, channel monetary funds into the budget, and, on the other hand, receive from the budget the means for the development of production and for current activities. With this system, the financing of these expenditures from the budget is carried out irrespective of the fulfillment by the branch or association (enterprise) of the obligations to it. This practice of financial planning and distribution of profit does not provide for the self-interestedness of the enterprises, or the branch (ministry) as a whole, in attaining high qualitative work indicators and does not correspond in full measure to the economical use of the allocated resources.

The new system of planning and distribution of profit stipulates the development of the five-year financial plan (with breakdown by individual years) at all levels, from enterprise to ministry. The overall volume of profit which must be left to the ministries, associations, and enterprises for their functioning is determined on the basis of the long-term norms, and increase in that volume depends upon the final results of their activities. An absolute sum of profit to be channeled into the budget as a guaranteed planned contribution is established.

The new system of cost-accounting financing of the branch, which is based on the establishment of long-term norms for deductions of part of the profit to be put at the disposal of the ministry, provides for the use of organizations' own profit primarily to cover all their own expenditures. The mechanism of distribution of profit on the basis of long-term norms, as compared with the existing system, creates the economic prerequites that intensify the action of the principles of cost accounting in all links of the branch (ministry): there is an expansion of the economic independence of all links of administration, from the enterprise to the ministry; it becomes necessary to compare constantly the expenditures and the results of the activities in all links of the branch complex; there is an intensification of the self-interestedness in the use of internal reserves for increasing the volume of production and in obtaining additional profit; there is an increase in the responsibility to the state budget, since payments to the budget in the planned amounts are guaranteed.

In conformity with these principles, the ministry that has converted to cost-accounting methods of activity and to the norm system of distribution of profit on the basis of the assignments that have been approved in the five-year plans has established for it stable norms for deductions from profit to be put at its disposal. The size of the norms depends upon the planned needs for funds for financing the expenditures for the development of production, science and technology, the formation of economic incentive funds, and the satisfying of other planned needs, and also depends upon the level of profitability in the branch.

The ministry, proceeding from the total amount of profit left at its disposal, and taking into consideration the development of production and profitability, establishes appropriate norms for the all-union (republic-level) industrial associations (VPO) and large-scale production associations (PO) and enterprises. The ministries, associations, and enterprises, after coordination with the ministry, within the limits of the profit left at their disposal on the basis of the established norms, can, within the annual plan, change the direction of its use without changing the sums to be channeled into capital investments, the fund for the development of science and technology, and the economic incentive funds.

The planned needs for funds in each year of the five-year plan are not identical, and, consequently, the size of the norm differs. The size must be established depending upon the increase of production, the planned expenditures, and the financial resources stipulated for the corresponding year of the five-year plan. The differentiated approach to the determination of the size of the norms for distribution of the profit during the individual years of the five-year plan corresponds in full measure to the tasks of the centralized regulation of the proportions of profit distribution and guarantees the self-interestedness of the ministries, VPO, PO, and enterprises in the fulfillment of the plan for all indicators of activity in each year of the five-year plan.

At the first stage of the development of cost-accounting of branch financing, provision was made for the principle of the complete self-financing of all expenses linked with current activities and with the socioeconomic development of the branch. That principle was introduced for the first time in instrument making. The high profitability of that branch made it possible for the enterprises and associations to obtain a profit which, taken together with other sources, made it possible to finance expanded reproduction completely with the use of the branch's own funds. However, in many industrial branches the level of profitability does not provide for the obtaining of profit that is sufficient to cover all the expenses incurred in expanded reproduction by the use of their own funds. Obviously, in individual branches this problem will not be completely resolved even after the introduction of the new wholeseale prices, effective 1 January 1982. Therefore, for the ministries operating with the norm distribution of profit, but without sufficient means for the self-financing of expanded reproduction, provision is made for using -- in addition to their own sources -- bank credit and budgetary funds. This opportunity has been granted to Minsel'khozmash, Minenergomash, and Mintyazhmash.

Great importance in the mechanism of profit distribution is being attached to the principle of distribution of profit in excess of plan. Until the present time, for branches operating in the system of cost-accounting financing, a single norm was established for the distribution of planned and above-plan profit. When there was overfulfillment of the profit plan by more than 2 percent, or, in certain ministries, 3 percent, the norm was lowered in proportion to the increase in the percentage of plan overfulfillment.

The experience at those ministries convincingly proved the incorrectness and the economic groundlessness of applying a single norm for deductions from planned and above-plan profit, since, with this situation, individual ministries -- and, within the ministries, individual VPO -- found themselves in different situations that were frequently economically unjustified. The cause of this was the dissimilar size of the norms, which were established in the plan depending upon the planned need for funds for expenditures and upon the size of the planned income. Thus, the norm for deduction from profit in the 1979 plan for Minpribor (with high profitability) was established in the amount of 39.1 percent; for Minsel'khozmash, 60.1 percent; and for Mintyazhmash and Minenergomash (with low profitability), 73.9 and 96 percent, respectively. Despite the different sizes of the norms in the plan, those ministries acquired identical rights for profit in excess of plan, that is, the function of the plan was automatically extended to the above-plan profit, the obtaining of which was not in direct dependence upon the level of planned expenditures with the particular profitability of the branch.

Thus, the ministries which have in their plan large expenditures and, as a result, a high norm, undeservedly receive at their disposal a considerable amount of the above-plan profit; for the ministries with more limited expenditures and a low norm, that amount is less, although they have expended identical efforts to obtain it. With this situation, the ministries, associations, and enterprises, when compiling the plan, will not be self-interested in reducing the expenditures and increasing the profitability of their production, since the norm will be reduced and the share of the received above-plan profit will also be reduced. As a result, the incentive role of the norm will be weakened.

By the decree of the CPSU Central Committee and the USSR Council of Ministers concerning the improvement of the economic mechanism, it has been deemed desirable to employ separate norms during the distribution of planned and above-plan profit and to establish for all ministries (associations and enterprises) a single norm for deductions in the amount of 50 percent of the above-plan profit to be distributed. It has been established that, with overfulfillment of the profit plan by more than 3 percent, one will deduct only 25 percent, and the remaining 75 percent will be channeled into the budget. The above-plan profit remaining at the disposal of the associations (enterprises) is channeled into the expenditures and deductions in conformity with the established statute governing the procedure for distribution of profit and with the statutes governing branch cost accounting.

This principle for distribution and use of above-plan profit takes into equal consideration the interests of the ministries (associations, enterprises) and the state budget. It encourages the increase in profitability and the reduction of the planned norm and affords all branches (ministries) equal rights to obtain the profit in excess of plan, and this put them in identical situations. The application of reduced norms, when there is a considerable overfullfillment of the profit plan, has been called upon to encourage the taking of more intensive planned assignments dealing with profit.

The improvement of cost accounting in the branch with the application of the method of norm distribution of profit is impossible without its further development in the middle and primary links of administration, since, the branch's cost accounting system is basically constructed on principles of the financial interrelationships of the ministries with the budgetary system and with the subordinate links (VPO, PO, and enterprises). During the first years of Minpribor's operation under the new conditions of cost-accounting financing, the established norm for the distribution of profit carried out a distributive function only in the interrelationships between the ministry and the budget, and failed to concern the middle and primary links of administration. Starting in 1975, the norm method of making deductions from profit was extended to the middle link of administration -- the all-union industrial associations.

The experience of employing the norm method in the middle link had a desirable effect upon the development of cost accounting in the VPO. But, as a result of the fact that the methodological foundations of cost-accounting financing with norm distribution of profit, as used in the branch, were transferred to the middle link without any changes, there arose a number of problems. For example, the subbranches (VPO) in the ministry develop at a dissimilar rate. The subbranches that develop at rapid rates cannot always provide completely for the financing of their expenditures by drawing on their own funds and therefore they use loaned funds, as a consequence of which the size of their norms increases sharply. At the same time, for the subbranches with slower rates of development, the norms can even drop. And although this does not disrupt the cost-accounting principles of intrabranch management, the incentive role of the planned norms in the development of production is considerably weakened, especially when distributing the profit in excess of plan.

The range of differences in the profitability rate and the needs for funds for one's own development is even broader for the production associations and enterprises. In those production associations and enterprises the planned assignments are corrected, and wholesale prices are reconsidered, most often within the year that is being planned. Therefore the norms are subjected to changes to an even greater degree than at the middle-link level, and therein consists the basic problem of the extension of the method of norm distribution of profit in the primary link.

Minpribor has not yet resolved that problem. Starting in 1980, Minenergomash (operating according to a two-link system of administration (and Minsel'khozmash (according to a three-link system) were the first to introduce in the primary link the method of normative distribution of profit.

Thus, judging by the experienced gained by Minpribor and other ministries that employ the cost-accounting financing of the branch, the thing that proved to be most complicated was the observance of the norm stability. The instability of the norms always arises when there are corrections in the planned assignments for capital investments and for production, but the basic reason for that instability is the annual re-examination of the wholesale prices of the output to be produced, since the stability of a price in which there is a consideration of all the socially necessary expenditures, consumer properites, and the quality of the output influences the state of balance in the five-year plan, the stability of the norms that are to be established for the individual years of the five-year plan, and the effectiveness of the basic principles of cost accounting.

In the previously mentioned decree of the CPSU Central Committee and the USSR Council of Ministers, steps are set forth for the intensification of the cost-accounting role of prices in improving the economic mechanism. The development of cost accounting will be promoted by the establishment, starting in 1982, of stable prices for the five-year plan, as well as the complete inclusion in the production costs of those expenditures that pertain to the output to be produced, particularly for geological-prospecting and reforestation projects, for the social security of the workers and employees. We shall introduce the payment (and inclusion among production costs) of water taken by industrial enterprises from water-management system.

Cost accounting will be reinforced by the development and introduction -- as stipulated by the decree -- of a system of progressive norms and norm lists for individual types of operations and expenditures (economizing) of labor, raw and other materials, and fuel-and-energy resources, the use of which will make it possible to compute the normative production costs of the output being produced, and, on that basis, to establish prices that correspond to the normative values of effectiveness of the production-economic activities of the associations and enterprises.

The cost-accounting mechanism for the distribution of profit can be reliable only in the event that all its elements are closely interacting with one another, that is, if they comprehensively encourage the increase in the economic effectiveness of production. One of the elements of this mechanism is the payment for production assets, which payment has been called upon to encourage the improvement of the use of fixed production assets, as well as the organization's own working capital. Payment for production assets as an economic lever has played a certain positive role, but its action was tied in only with the formation of incentive funds through the indicator of computed profitability, which is computed on the basis of the size of the computed profit. This indicator was not approved by anyone, and, moreover, the incentive role that is manifested through it -- the role of payment for assets -- was insignificant in the cost-accounting mechanism.

It was necessary to develop measures to intensify the incentive role of payment for assets. This was partially influenced as a result of the conversion of Minsel'khozmash, Minelektrotekhprom, and Mintyazhmash to the new operating conditions. In Minsel'khozmash, for example, additional intrabranch payment for assets was employed, but that measure was not comprehensive: the enterprises were punished for the poor use of fixed production assets and working capital, but were not given any incentives when they achieved positive results in using them.

In order to intensify the incentive role of payment for assets, the decree of the CPSU Central Committee and the USSR Council of Ministers concerning the improvement of the economic mechanism introduced a new procedure. That procedure stipulates that, in the event of above-plan and uncredited reserves of material assets and of equipment that has not been installed on time, additional payment for assets is paid into the budget by reducing that part of the profit which is left (on the basis of the norm) at the disposal of the association or enterprise for production-economic needs. And, conversely, in the event of overfulfillment of production assignments and of profit with a lesser (as compared with the plan) value of the production assets, the funds that have been economized as a result of payment for assets remain at the disposal of the association or enterprise, and there is a simultaneous reduction by a corresponding amount in the payments to be paid into the budget.

The economizing of payment for funds is not above-plan profit and remains completely at the disposal of the production associations (enterprises) that have received it as a result of the efficient use of the fixed production assets and their own working capital. At the discretion of the associations (enterprises), it can be used for financing intra-management expenditures, the covering of which by above-plan profit is authorized according to the existing statute.

An important element in the cost-accounting financing of the branch is the formation, from profits in accordance with the established norm, of a single fund for the development of science and technology. Its formation makes it possible to coordinate into a single whole the planning, financing, and incentives for the entire cycle for the development of science -- from research to the introduction of new technology into production -- thus assuring the comprehensive approach to the development of cost accounting in scientific organizations, production associations, and enterprises.

Prior to the conversion of scientific institutions, associations, and enterprises to the new system of planning, financing, and incentives, there were created in industry a fund for the financing of scientific-research projects and a fund for the assimilation of new technology, drawing upon deductions from production costs, and when those deductions were insufficient, by allocating budgetary appropriations for scientific-research projects. With this variety of earmarked sources and funds, the maneuvered use of monetary funds was hampered, and frequently the periods of time required for the development and introduction of new technology dragged out, and the quality of that technology was impaired.

In order to improve the mechanism of administration of the scientific-technical progress, in addition to the single fund for the development of science and technology, a factor of great importance is the planning of output on the basis of production orders and quality certification. The drawing up of intraministerial production orders based on topics that have been established in the assignments for the five-year plan for the development of science and technology makes it possible to assure complete planning, which encompasses all stages of the projects dealing with the assigned topic. The production orders have the force of economic contracts; they provide for all stages of development; the expenditures for each stage; the limit price of the article; the quality category; the sources of financing; the economic benefit; the share of the economic benefit to be obtained by each executor; and the size of the incentive funds.

A role of no small importance in accelerating the introduction and increasing the effectiveness of new technology was played by the changing of the principles for the formation of economic incentive funds in scientific associations, institutions, and enterprises. At the present time these funds are formed on the basis of the total economic benefit derived in the national economy as a result of the use of the achievements of science and technology, rather than as a result of the use of the wage fund, as had been the situation previously. This will eliminate the process of equalization in giving incentive payments to collectives and individual workers.

An incentive for accelerating the introduction of new, progressive technology is the establishment, in the wholesale prices of output with improved quality, of markups that provide for the compensation to the manufacturer of the expenditures for the production of output with improved quality and the obtaining of additional profit, which is deducted for payment into the incentive funds for scientific institutions, associations, and enterprises. For manufacturer-enterprises, rebates that are to be paid into the state budget are established for the wholesale prices of output that is put in the second quality category.

Neither the markup nor the rebate is taken into consideration in the plan. As for the actual plan fulfillment, when it is being evaluated one takes into consideration the total amount of the markups and rebates. When output in the second quality category is being sold, the rebate in the price is taken into consideration only for the supplier-manufacturer who has disrupted the plan for removing obsolete output from production. The consumer of the obsolete design, however, pays for that output at the wholesale price.

The decree governing the improvement of the economic mechanism stipulates a number of measures for intensifying the action of the economic levers and incentives for the acceleration of the introduction of the achievements of scientific-technical progress; in particular, there is an increase in the incentive role played by the single fund for the development of science and technology; there is an expansion of the sphere of its use. This fund must be used to finance especially important scientific-research projects, and only if this fund is insufficient will use be made of funds from the state budget. If necessary, some of the money in the fund will be transferred and placed at the disposal of industrial associations and large-scale production associations and enterprises. The cost of operations of an industrial nature which are linked with the assimilation and introduction of new technology and which are carried out at the expense of money in the single fund for the development of science and technology, should be taken into consideration in the overall volume of production, with the computation of the normative profit for the corresponding groups of articles. In the machine-building branches of industry, one-time bonuses are being introduced for the development and assimilation of the production of especially important and highly effective types of machinery, equipment, and technological processes. The payment of bonuses will be made from money in the single fund for the development of science and technology.

In order to intensify the role played by the economic levers and incentives in expanding the output of production with high quality and in removing obsolete output from production, the decree stipulates an increase in the size of the incentive markups to the wholesale prices for new, highly effective output and also stipulates the periods during which they are in effect. Up to 70 percent of the additional profit (total amount of markups to wholesale prices) obtained by the production association (enterprise) from the sale of new, highly effective output and output with the state Seal of Quality is channeled into funds for economic encouragement of the participants in the creation of that output -- the production associaions, enterprises, NII [scientific-research institutes] and KB [design bureaus], and experimental enterprises; 15 percent is paid into the single fund for the development of science and technology at the ministry; and 15 percent is paid into the budget. For output with the second quality category, and also for output that is not certified within the established periods of time, there is a sharp increase in the size of the rebates: the rebate will be 50 percent of the profit, and after the expiration of the deadline for removing output with the second category of quality from production, the total amount of the profit will be transferred to the budget.

For the further development of cost accounting, provision is made for conversion of the NII and KB to the payment for completely finished and accepted projects, with the simulataneous granting to them of their own working capital. The experience of the NII and KB in Minelektrotekhprom has shown that this procedure assures the more clear-cut carrying out of measures for economizing the labor and monetary resources and for reducing the stages of research and the volume of uncompleted scientific-research and experimental-design projects.

An important link in the cost-accounting system is the mechanism for the formation and use of collective funds for economic encouragement. The basic factor in this mechanism is the dependence between the results of the economy activity in increasing the effectiveness of production and the size of the economic incentive funds that are being put at the disposal of the collectives. Many years of experience in the formation and use of these funds have confirmed the effectiveness of that cost-accounting mechanism with which their size depends directly upon the increase in the effectiveness of production.

A difference inherent in the newly introduced procedure for the formation of material incentive funds consists in that an even greater importance than with the existing system is attached to the qualitative indicators, inasmuch as the extent of the incentive funds in the five-year plan and in the annual plan is made directly dependent upon the increase in labor productivity and the production of output with the highest category of quality (or another indicator of output quality, as established for the particular branch).

The new procedure also provides for the intensification of the role played by the indicator of profit in determining the extent of the material incentive fund. Inasmuch as the deductions of funds to be paid into the material incentive fund are made on the basis of norms which, as a rule, are established in percentages of profit, it becomes a third fund-forming indicator which, to a considerable degree, determines the size of the material incentive fund.

Taking into consideration the experience accumulated by Minnefteprom and Mingulеprom in the formation of incentive funds on the basis of rates by the ton, the decree stipulates that, proceeding from the peculiarities of the individual branches, other qualitative indicators can form the basis of the formation of those funds: the economizing of material resources; the increase in return on investment and in the shift coefficient; the level of profitability and the reduction of the production costs; and, in the extractive branches, the increase in the production of output as expressed in physical terms.

As an incentive, increased norms for the formation of economic incentive funds are established for enterprises and associations which considerably increase the output of new, high-quality output intended for technical and production use.

Depending upon the fulfillment of the delivery plan based on products list (variety) and on the deadlines in conformity with the economic contracts (work orders), the deductions to be paid into the material incentive fund will be increased or decreased.

The fund for social and cultural measures and for housing construction will be formed in the amount of 30-50 percent of the material incentive fund. Enterprise collectives are granted the opportunity themselves to determine the directions to be taken in expending that fund. It has also been authorized to use for housing construction and social and cultural measures part of the money in the material incentive fund.

The production development fund which is formed from part of the profit and the depreciation deductions will be used to carry out measures linked with technical re-equipment, automation, and mechanization of production, and with improving the organization of production and labor.

Effective measures are planned for the purposes of increasing the self-interestedness of the enterprise collectives in accelerating the increase in labor productivity and in reducing personnel turnover. The planned expansion of the use of long-term norms for expenditures of wages per ruble of output will intensify the dependence of wages upon the increase in labor productivity.

The production associations and enterprises have been granted the right to pay -- from the amount economized in the wage fund, as compared with the established norm or planned wage fund -- markups onto the wage-classification rates and salaries paid to workers in recognition of their combining occupations and their execution of the established volume of work with a smaller number of persons, and also paid to qualified workers employed in especially important types of work, in recognition of their high level of professional skill. In order to encourage the initiative in introducing technically substantiated norms for labor and their prompt re-examination, provision is made for the payment to workers of a lump-sum award, paid for from the economizing that results from the re-examination of those norms.

The form that must become the basic one is the brigade form of organizing and encouraging labor. This form makes it possible to achieve the more effective use of the economic incentives in organizing production and to combine successfully the personal interests and the interests of the collective.

The steps stipulated in the decree of the party and government concerning the improvement of cost accounting, and intended for intensifying the economic levers and incentives, must become an important reserve for increasing the effectiveness of production.

COPYRIGHT: Izdatel'stvo "Ekonomika," "Planovoye khozoyaystvo," 1980.

5075
CSO: 1820

UTILIZATION OF RESOURCES AND SUPPLY

TRENDS IN STATISTICAL CONTROL OF SUPPLY DETAILED

Moscow VESTNIK STATISTIKI in Russian No 11, Nov 80 pp 3-9

[Article by F. Kravchenko and M. Daragan: "Basic Trends in the Development of Material and Technical Supply Statistics"]

[Text] The scheduled 26th CPSU Congress, the convocation of which was decided at the June (1980) Plenum of the CPSU Central Committee, will determine the main course of the country's economic and social development for the coming five-year period and for the more distant future.

At the 25th CPSU Congress, tasks were set in regard to improvement of the mechanism of economic operation and planning. After the congress, these tasks were further developed and specified in the resolutions of the Central Committee plenums and in the decrees passed by the CPSU Central Committee and the USSR Council of Ministers. The decree "On improving planning and strengthening the influence of the economic mechanism on increasing production efficiency and work quality", which was adopted on 12 July 1979 by the CPSU Central Committee and the USSR Council of Ministers, contains a whole system of measures concerning the further development of the country's economy. In particular, the decree set targets for the further improvement of planning and of the management of production and of material and technical supply.

In regard to implementation of these tasks, the statistics of material and technical supply are of great significance. With the aid of a system of indicators, this branch of statistics provides a detailed quantitative and qualitative description of the supply of materials and equipment as a process of systematically distributing producer goods and supplying them to the sectors of the national economy and also as a process of practical management and regulation of material resources.

The statistics of material and technical supply must provide the planning and management organs with the data essential to the process of supplying with producer goods all sections of the national economy; in good time, the statistics must disclose shortcomings in regard to material provisioning and point out reserves and ways of improving the supply of materials and equipment to the national economy and of fulfilling the state plans. The statistics of material and technical supply should describe the development of new forms of communication between customers and suppliers: of the delivery of products in accordance with direct, long-range operational communication, of guaranteed, complete provisioning of the customers on the basis of agreements with the regional material and technical supply administrations, of wholesale trade in producer goods by means of the bases, warehouses and stores of the regional procurement and marketing organs. The most important task of the material and technical supply statistics is to describe the fulfillment of the quotas concerning material, fuel and energy economy in the various production sectors.

Under present conditions--characterized by the dynamic and proportionate development of the national economy, the steady expansion of the scale of national production, the acceleration of social progress and the extension of intersectorial ties in the national economy--fulfillment of the tasks established necessitates improvement of work quality and efficiency on the basis of statistical research in the field of material and technical supply of all sections of the national economy.

On the basis of the experience gained in the economic and statistical work carried out in the state statistics system in regard to material and technical supply, one can single out three trends in regard to measures for improving the statistics of that sector:

Firstly, improvement of the system of accounting indicators and development of new statistical indicators; improvement of the methodology of the statistical study of material and technical supply and of the production economics of the organizations in that sector.

Secondly, improvement of accounting and reporting in regard to material and technical supply in conformity with the implementation of measures in regard to improving planning and strengthening the influence of the economic mechanism on increasing production efficiency and work quality in the national economy.

Thirdly, extending the mechanization and automation of the statistical, accounting and computing work concerning the supply of materials and equipment and the production economics of the organizations in that sector.

Subsequent to the 25th CPSU Congress, the organs of state statistics have been doing a great deal of work in regard to implementing the measures of the aforementioned trends.

At present, work is being done in regard to improving the statistical studies concerning reserves of producer goods and supplying these goods to the various sectors of the national economy and in regard to utilization of the raw material, fuel and energy resources: Improvements are being made in the methodology of economic-statistical analysis of the production economics of material and technical supply organizations; greater efforts are being made in regard to analysis of fulfillment of the plan concerning shipments of capital goods and intersectorial shipments--under subcontracting arrangements--of cast iron, steel and nonferrous metal, forged pieces, stamping dies and products made of synthetic materials. In the one-time accounting of the material and technical supply organizations as of 1 March 1980, a sounder system of indicators has been employed. This system comprises 50 indicators.

On the basis of the analysis of statistical data, the planning and management organs are regularly presented with economic reports on various problems concerning the state and development of material and technical supply and the provisioning of the various economic sectors with materials, fuel and energy, and in particular on problems concerning surplus material resources, uninstalled equipment and fuel, material, fuel and energy savings, fulfillment of the norms and quotas concerning the average reduction of input of raw materials, materials, fuel, thermal and electric power, etc.

In the system of measures that are aimed at improving planning and strengthening the influence of the economic mechanism on increasing production efficiency and work quality and that are outlined in the decree passed by the CPSU Central Committee and the USSR Council of Ministers, improvement of the plan indicators and of the criteria for evaluating the results of the work of the ministries, associations, enterprises and organizations is of great importance.

In the system of approved plan indicators, natural indicators are assigned a much greater role. In the system of indices of output produced, the necessary changes are being made. For example, in the machine building industry plans are being outlined for producing equipment in accordance with a broader products list and in units of measurement that more fully reflect its productivity and other qualitative parameters.

The aforementioned decree stipulates:

1. Introduction of long-range planning concerning shipments of basic types of material and technical resources; expansion of the products list, in accordance to which the material balances and distribution plans are drawn up for a five-year period; drawing up material balances for a 10-year period.

2. Further development of the normative planning method through extensive utilization of progressive norms and standards concerning input of the most important types of material resources.

3. Development of a system of measures concerning consolidation of direct, long-range operational communication, of contractual relations in regard to the development of progressive forms of guaranteed supply for the enterprises and construction organizations.

The changes in the material-technical supply planning are of fundamental importance for the further improvement of the statistics of material-technical supply, whose system of indicators must become not only identical with the system of plan indicators, but also more extensive. In this connection, we are extending the range of tasks in regard to improving the accounting of the specific input of raw materials, materials, fuel, thermal and electric power and the balancing work in connection with the analysis of the availability and utilization of material-technical resources. The system of indicators of the material resource utilization statistics will include indicators describing fulfillment of the quotas concerning overall proportionate input of metal and reduction of the material-intensiveness of the most important types of goods in natu-al indices.

It is necessary to solve a number of methodological and organizational problems in regard to the development of statistical norms and standards for the input of raw materials, materials, fuel, thermal and electric power and in regard to extension of the economic-statistical analysis of material resource utilization. Control of norms and standards will help to work out measures for strengthening the scientific validity, proportionality and balance of the plans, for a more thorough disclosure and utilization of the production reserves and for further improving production efficiency.

For organizing the control of plan target fulfillment, it is essential that on all levels of economic management the fulfillment of the five-year plan regarding average reduction of the input of raw materials, materials, fuel and thermal and electric power in the production sector be assessed cumulatively from the beginning of the five-year plan, i.e. in relation to the base year, which is the last year of the preceding five-year plan, and likewise, fulfillment of the annual plan cumulatively from the beginning of the year.

It is also necessary to solve a number of complex organizational problems in regard to the improvement of regional statistics of material-technical supply. Above all, it is necessary more fully to disclose all usable resources of raw materials, materials and fuel, to give a full quantitative and qualitative description of all types of material, fuel and energy resources, to control the quantity, quality and utilization of these resources in accordance with their types and their sources of formation, and to compile regional material balances for accounting purposes.

This statement of the problem is due to the fact that so far the operative report forms concerning material-technical supply have not covered all of the enterprises belonging to ministries and departments nor the types of material and fuel-energy resources and the trends concerning their utilization. For example, the reports based on Form No 11 (suppl.), which are designated for the accounting and analysis of fulfillment of the norms and quotas concerning input of fuel and energy resources are not filled out by enterprises belonging to an agricultural ministry in a union republic. The report based on Form No 12 (suppl.) that is intended for the accounting and analysis of the overall and the proportionate input (normative as well as actual) of the most important types of material resources for the production of goods covers only enterprises belonging to ministries within the jurisdiction of the Council of Ministers of a union republic or to a number of ministries of the machine building industry. The list of materials submitted in this report does not conform with the list of materials contained in the report based on Form No 1 (suppl.). The report based on Form No 20 (suppl.) is drawn up only for enterprises belonging to ministries within the jurisdiction of the council of ministers of a union republic. The list of materials and articles presented in this report does not conform with the list of materials and articles submitted in the report based on Form No 2 (suppl.). A number of reports--based on Forms No 1 and No 2 (suppl.) and on other forms--have not yet been worked out in accordance with the various sectors of the national economy.

Provision is made for measures to improve the economic-statistical analysis of material and technical resource utilization and of the production economics of the material and technical supply organizations. There are a number of complex problems in regard to accounting of plan quota fulfillment, coordination of the methods of accounting of present and planned norms, and the development of individual and averaged rates of proportionate consumption of material resources, fuel, and thermal and electric power. It is necessary to introduce a more thorough methodology of determining the long-term rate of actual average reduction in the input of material resources for ministries and enterprises withing the jurisdiction of the councils of ministers of union republics. Above all, we must focus our attention on determining the level of reduction in the actual proportionate input of these resources in a given period and the percentual reduction in actual proportionate input as against the quotas established.

We must develop new statistical indicators for a detailed economic analysis of the basic trends of material and technical supply (indicators of the net weight of individual types of material resources, indicators of the fuel- and materials-(metal) intensiveness of products, of the volume of raw materials and materials expended, of the actual waste and losses--in terms of cost--of raw materials, materials and thermal energy. We must work out the elements of long-term analysis of material and technical supply and we must develop interrelated indicators concerning the production and distribution of material resources and indicators for substantiating the intensity level of the material and technical supply plans.

Solution of the problems at hand is of great importance for improving the statistical information used in material and technical supply planning.

The work concerning improvement of the methodology and methods of statistical research in the field of material and technical supply is correlated with measures aimed at improving the accounting and reporting in this field and with the solution of a large complex of problems in regard to raising the level of mechanization and automation of the statistical operations specified by the operating plan of the functional subsystem (FP) of the ASGS [Automated Sytem of State Statistics]--"Material and Technical Supply Statistics."

This functional subsystem represents a complex of statistical tasks in regard to the development of indicators describing the availability and utilization of material, fuel and energy resources and equipment in various sectors of the national economy and the production economics of the material and technical supply organizations.

At all levels of the system of state statistics, the tasks of the functional subsystem are carried out with the aid of electronic data processing complexes (KEOI), i.e. aggregates of organizing-programming equipment--that ensure systemic organization of data collection and processing and that are necessary for accomplishing the tasks of the subsystem--and of analytical complexes.

The KEOI of the functional ASGS subsystem "Material and Technical Supply Statistics" include: Reports on surplus, intake and input of raw materials and materials in production operations and construction and reports on surplus, intake and input of fuel (forms No 1, 2 and 4 (suppl.)); the "Report on fulfillment of the plan concerning intersectorial cooperative shipments of cast iron, steel and nonferrous metal, forged pieces, stamping dies and products made of synthetic materials" (Form No 5 (deliv.)); "Inventory of uninstalled equipment" (forms No NO-1 and NO-2); the "Report on availability of tractors and various types of machinery and equipment as of 1 June" (Form No 1 (mech.)); the "Report on fulfillment of the norms and quotas concerning average reduction of input of fuel and thermal and electric power" (Form No 11 (suppl.), annual); the "Report on norm fulfillment and input of fuel and thermal and electric power" (Form No 11 (suppl.), short).

The functional ASGS subsystem "Material and Technical Supply Statistics" includes the following analytical complexes (AK): "Statistical study of material resource utilization" and "Statistical study of material resource reserves."

The sytem of input information in each AK is based on a number of statistical report forms. For example, in solving the problems of the AK "Statistical study of material resource utilization", statistical report indicators are employed (forms No 1, 2 and 12 (suppl.)). The input indicators enable one to obtain output tables of an analytical type. They contain important quantitative data concerning material resource utilization. Among them are the following: Savings (overexpenditure) of the most important types of material resources; classification of enterprises in accordance with fulfillment of the quotas concerning average reduction of input of raw materials and materials in the period under review (year, five-year period); savings due to introduction of organizational and technical measures; reduction of the proportionate input of metal required for various types of machinery and equipment. As for solving problems of the AK "Statistical study of material resource reserves", a number of important indicators contain output tables.

At the oblast, republic and union levels of the functional ASGS subsystem "Material and Technical Supply Statistics," the AK practically provide all the requisite indicators for describing the utilization of material resources and reserves. This process ensures large-scale introduction of index-based analysis. The output tables allow one to carry out a structural-comparative analysis of the dynamics and a factor analysis of the utilization of material resources and reserves and also a comparative analysis of the proportionate input of material resources for the production of identical goods in enterprises belonging to diverse ministries and departments and on this basis to show the reserves for improving the utilization of material resources.

As was shown by the calculations carried out by the Ukrainian branch of the USSR Scientific Research Institute of Central Control Systems, operation of the KEOI and AK ensures acceleration of the processing of statistical information and absolute and relative savings of labor input for the processing of statistical information, while significantly increasing the volume of information produced. The analytic level of the information is raised by processing it in an integrated fashion, by extending the makeup of the statistical problems--of both a regular and an irregular type--and by obtaining new statistical data. We are concerned with obtaining data concerning material and technical supply in terms of a regional cross-section, with combining in the statistical tables ministry and sectorial data and regional and sectorial data, and with obtaining new tables developed through processing data based on the combination of a number of tables. It is essential that we obtain -- by means of the KEOI and AK--data for a long-range analysis, for validating the level of intensification of the plans for commodity production and distribution.

Further improvement of the efficiency and quality of statistical research in the functional ASGS subsystem "Material and Technical Supply Statistics" is inseparably linked with continuation of the work in regard to creation of new and improvement of currently operative KEOI and in regard to creation and development of AK.

Among the new KEOI that must be incorporated in this functional ASGS subsystem are the following: "Performance balance of scrap ferrous metal" (Form No 9 (suppl.)); "Report on material resource economies" (Form No 18 (suppl.)); "Summary report on fulfillment of the norms and quotas concerning average reduction of input of raw materials and materials" (Form No 12 (suppl.)); "Report on delivery of electric power" (Form No 9 (deliv.)); "Summary performance balance for sectors and input trends" (Form No 8 (suppl.)); "Performance balance for nonferrous metal scrap and waste" (Form No 17 (suppl.)); "Annual enterprise (organization) report balance for fuel and energy" (Form No 1 (TEB)); "Report on surplus, intake, input and delivery of fuel and energy" (Form No 1 (RTE)).

It is necessary to incorporate new AK: "Statistical study concerning the intake, procurement and shipments of the most important types of materials, scrap metal and equipment"; "Statistical study concerning the volume of material, fuel and energy resources in regard to production list items"; "Statistics concerning assets sold and allocated"; "Annual material report balance"; "Complex analysis of the production economics of the material and technical supply organizations."

The aforementioned AK must be substantially expanded by including in them indicators of the considered types of products and operations in accordance with the complete products list and of the most important types of raw materials and materials expended on their production in accordance with the individual rates of consumption. Incorporation of the new KEOI and AK is inseparably linked with the efforts concerning further improvement of the quality of program- and methodology-related work in the statistical research concerning material and technical supply.

Improvement of the efficiency and quality of the statistical research concerning the supply of materials and equipment and the production economics of that sector is directly related to the further development of the mechanization and automation of statistical data processing. To this end, it is necessary to accelerate the preparatory work for introducing KEOI and AK on all levels of the functional ASGS subsystem "Material and Technical Supply Statistics," to create a data base as a basic component of an automated data bank for the functional subsystem, to formalize the functions of the economic-statistical data analysis and to automate the data processing by means of an automated data bank.

In establishing the data base for the functional ASGS subsystem "Material and Technical Supply Statistics," it is necessary to solve the problems concerning the interconnection and methodological and methodical compatibility of the material and technical supply indicators with the indicators of other functional subsystems of the ASGS, above all with the subsystems "National economy balance," "Industrial statistics," "Statistics concerning scientific-technological progress," Statistics concerning capital construction," and "Agricultural statistics."

In establishing the data base for the functional ASGS subsystem "Material and Technical Supply Statistics," it is essential that one solve the problems concerning control of fulfillment of the plan and of the complex analysis of the statistical and accounting data on the basis of information exchange between the present functional ASGS subsystem and the functional subsystems of the ASPR [Automated System of Plan Calculations]. In this regard, solution of the problems regarding the informational and methodological compatibility of these functional subsystems assumes great importance.

Developing the functional ASGS subsystem "Material and Technical Supply Statistics" on the basis of the ASGS ABD [Automated Data Base], one can curtail the KEOI of the subsystem in connection with solving its regular problems by means of the ABD. At the same time, one can develop new KEOI for processing statistical data of one-time examinations and calculations in connection with the study of various problems concerning the supply of materials and equipment and the production economics of that sector. One can also develop new KEOI based on coordination of the statistical reporting indicators with the indicators of one-time examinations and inventories in the field of material and technical supply.

Development of the functional ASGS subsystem "Material and Technical Supply Statistics" is ensured with raising the level of integration of statistical data processing by combining several KEOI belonging to the present functional subsystem in a single KEOI; by forming large blocks of data on the basis of associative indicator links; by combining individual sources of information (e.g. data of the reports based on forms No 1 and No 2 (suppl.)); by eliminating the dispersal of the statistical data on material and technical supply and the incompatibility of data that are contained in the various subsystems, but that are used in the functional ASGS subsystem "Material and Technical Supply Statistics"; by standardizing the information sources in regard to all items; by dividing the output data of the functional ASGS subsystem "Material and Technical Supply Statistics" into two parts: a) Output data of the functional subsystem regulated on the basis of statistical methodology and submitted to the organs of state statistics; b) output data of the functional subsystem regulated on the basis of statistical methodology and submitted to the organs in charge of planning and control of material and technical supply.

Implementation of the entire complex of operations concerning improvement of the material and technical supply statistics meets the requirements in regard to further reduction of the time required for processing statistical information, the requirements in regard to improvement of the quality and reliability of the data and the requirements in regard to preparation of scientifically validated statistical data for solving the problems of planning and control in the field of material and technical supply.

COPYRIGHT: Izdatel'stvo "Statistika", "Vestnik Statistiki", 1980

8760
CSO: 1820

ECONOMIC MODELING AND COMPUTER TECHNOLOGY APPLICATION

GLUSHKOV, ASSOCIATE DISCUSS COMPUTER USE PROBLEMS

Moscow EKONOMICHESKAYA GAZETA in Russian No 52, Dec 80 p 11

[Article by Academician V. Glushkov and Doctor of Economic Sciences Yu. Kanygin, of Kiev: "The Development of a Sector; On the Problems of Machine Data Processing"]

[Text] The birth of new national economic sectors is not a rarity in the age of the scientific and technical revolution. Before our very eyes, it can be said, there have arisen radio electronics, the sectors of the nuclear, space, and microbiological industries, and so forth. And machine information has certainly made itself felt, and this is often termed the data processing industry.

Data processing (an indispensable part of management) has become an independent sphere of activity based upon machine technology in the form of electronic computers, terminals, and modern devices for the fixing and transmitting of data. It does not merely serve managers, engineers or designers, but rather reconstructs organizational processes, and replaces the traditional "paperwork" with man-machine dialogue systems which increase the capabilities of the workers of planning and management bodies by several magnitudes. The technical equipping of the management sphere is as important as is the technical equipping of the material production sphere.

It has been estimated that each year more than 500 billion economic operations (acts) are carried out in our nation. Their realization entails the drawing up and movement of documents which, according to the same estimates, amount to over 60 billion units a year.

As a result of the complicating of economic activities, the flows of planning and management documents over the coming decade can double. Machine information science not only frees management from the "paper burden," but also arms the production workers with scientific information resources. Powerful data retrieval systems help mobilize scientific potential and its use in production.

The development of the national economy leads to a further complicating of it, to specialization, to diversification in production and to the birth of multilink structures. The management system should hold the growing and branching economic organism in a single specific operating channel. This is aided by the improving of the management mechanism (to which the party gives great significance) and by the radical rise in the technological power of the planning and management system on the basis of computer networks linked together into a statewide automated data collection and processing system.

Over the last two five-year plans, in accord with the decisions of the 24th and 25th party congresses, in our nation much has been done to form the industrial technology of organizational [office] processes. Under these conditions, there are the urgent problems of consolidating efforts for further industrialization of the management and control processes, and this, in turn, requires, in our view, the organizational formation of machine information science as another infrastructure (service) sector.

These problems are not simple, and require discussion and thorough examination.

First of all, why has the question arisen of a separate national economic sector? The industrialization of one or another sphere of activity and the growth of its scale in and of themselves are still not the basis for "canonizing" it as a sector. At the same time, if this actually is a sector (according to objective criteria), then a delay in its organizational formation can cause undesirable consequences, for it is a question of one of the key spheres which largely determines the efficient use of the entire potential of the nation.

Machine information science in its present form possesses all indications of an infrastructure (supporting material production) sector. At the same time the stronger and more developed our economic computer potential becomes, the more apparent appear certain negative trends in its utilization, and the more obvious it becomes that information and computer equipment is being planted in an organizational environment which is in no way suitable for it. There are many reasons for this, but they are rooted in the following: the organizational and managerial formation of machine information science as a sector has lagged behind technological formation.

The problem is not merely that machine information science without the appropriate formation has been deprived of the advantages of vertical management. In a certain sense it has been "outside" planned leadership in its present understanding. It has been "broken" into pieces, and here the elements of local (of different departments) independence and even primitive work are too apparent, for example, when one or another plant which develops an automatic control system by its own efforts is often guided by its own understanding of the purpose and procedural level of the system. Under such conditions, machine information science as it grows in the future can produce a disproportionately small return.

Let us draw an analogy with communications. Our means of communications are controlled by one organization, the USSR Ministry of Communications. The users lease them under economic accountability and operating conditions which are determined by this department. But the number of owners of expensive electronic computers is uncontrolled. At the same time, the unity of technical policy, the unification of software and the conditions for operating the equipment--these questions in machine information science are more acute and complex than in traditional communications.

It is also essential to settle the questions of the priority in providing computer capacity for the various sectors and enterprises, and of reallocating the large computers in accord with general state interests. How and who orders the computer complexes and automated systems, and precisely the systems, and not simply machines? It is not accidental that industry still does not supply the necessary sets of equipment for automatic control systems in the proper range and on a large scale, let alone machine servicing and the accompanying of deliveries. Such a situation cannot be radically rectified until proper demands are made by a unified, procedurally intelligent client (the developer and user).

The process of designing the automated control systems remains very labor intensive. Up to 40 percent of the expenditures on the entire setting-up complex goes on designing. This is the result of isolation in design work. A large portion of the problems of reorganizing paperwork and converting the data flows to machine carriers could be standardized.

Recently a system of state standards for automatic control systems was worked out and approved. However the observance of the standards encounters major difficulties due to the absence of uniform control by the client.

The same thing could be said about the software for the automatic control system. The tasks of disseminating standard software have been entrusted to the organizations of the Ministry of Instrument Making, Automation Equipment and Control Systems and the Ministry of Radio Industry. But certainly the functions of the client (user) and the manufacturer of the hardware and software are different. It is as if, for example, the aircraft manufacturing plants were entrusted with the functions of serving passengers, or, on the contrary, Aeroflot was told to manufacture aircraft. This obviously would not be the best solution to the questions of developing air travel. And this is the question here as well.

At present, the leadership over the development of the automatic control systems and the introduction and use of computers is provided by the USSR State Committee for Science and Technology, and within the structure of the committee there is a glavk [main administration] for computer equipment and control systems. In the early stages of "computerization," when the matter came down basically to saturating the sectors and enterprises with computer equipment, the other managerial levels here obviously were superfluous. But now the situation has changed if only because we have reached a certain "critical mass" in this area. Along with the problems of technical progress, as we have already said, purely operational problems are becoming evermore acute and complex. An entire area of management has arisen, it is rapidly growing and becoming more complex, and the management of this goes beyond the competence of the USSR State Committee for Science and Technology.

The USSR State Committee for Science and Technology in the future obviously will exercise leadership over technical progress in the designated sector (as in other sectors). But at the same time, here there must be comprehensive management.

It is in no way essential to concentrate all computer technology, down to the minicomputers, within the structural confines of machine information science. Here an analogy can be drawn with motor transport which in no way is completely under the Ministry of Motor Transport. It would be advisable to unify the base computer centers which comprise the basis of the OGAS [Statewide Automatic System for Collection and Processing of Information for National Economic Accounting, Planning and Management]. The remaining computer centers can remain under the various ministries, enterprises and national economic organizations. However, the right of operational, technical, and dispatcher leadership over all computer centers should be in the same hands.

The Draft of the CPSU Central Committee to the 26th Party Congress points to the necessity of providing extensive use of automatic manipulators (industrial robots), and expanding the automation of design and scientific research work using electronic computers.

Thus, machine information science is becoming a major factor in improving not only the methods of production management, but also in reconstructing its technical base on the basis of cybernetic automata.

The problems of its technological consolidation and organizational formation as a sector should, in our opinion, be reflected in the draft of the Basic Directions.

10272
CSO: 1820

LITHUANIAN PARTY OFFICIAL DISCUSSES REPUBLIC'S ECONOMY

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 11, Nov 80 pp 3-13

/Article by P. Grishkyavichus, first secretary of the Central Committee of the Communist Party of Lithuania, Vilnius: "The Lithuanian SSR: Economic Growth and Ways of and Factors in Increasing the Efficiency of Public Production"/

/Text/ This year the Lithuanian nation festively celebrated a bright and joyous holiday--the 40th anniversary of the restoration of Soviet power in Lithuania. The moving message of greetings by the CPSU Central Committee, the Presidium of the USSR Supreme Soviet and the USSR Council of Ministers, the warm congratulations by L. I. Brezhnev, general secretary of the CPSU Central Committee and chairman of the Presidium of the USSR Supreme Soviet, and the third government award--the Order of the October Revolution--given to the Lithuanian SSR left an indelible mark in the hearts of all workers in Nemanskiy Kray and inspired them to new labor achievements for the sake of a bright future--communism.

For 4 decades the economy of the Lithuanian SSR has developed in the country's single national economic complex as its organic component. Everything that has been done on Lithuanian land during the years of Soviet rule is permeated with the unfading light of Lenin's teachings and is a spectacular result of the implementation of the wise Leninist national policy of the CPSU and of the fraternal friendship of all Soviet nations. The socialist path opened up unlimited opportunities for a dynamic and proportional development of the republic's productive forces and for the formation of a branch structure of the national economy and ensured the implementation of very profound transformations in all the spheres of life.

The rates and trends of development of all material production branches are due mainly to the need for a significant rise in the industrial level of the national economy, its overall and harmonious growth, the population's full and rational employment and increase in the republic's contribution to the solution of all-Union problems on the basis of the maximum utilization of local resources and the demands for an optimum territorial division of labor on a countrywide scale.

The high rates of economic growth of the Lithuanian SSR, which exceeded the average indicators in the country for almost the entire postwar period, are some of the most characteristic features of the development of its productive forces.

During a historically short period they made it possible to overcome the economic backwardness inherited from the capitalist system and to create a highly developed economic and scientific-technical potential.

The industrialization of the republic's national economy and, primarily, the rapid development of industry played an exceptional role in ensuring a highly dynamic economy and profound changes in its structure. From one 5-year period to another the republic's industry increased its power and made ever greater advances. The dynamism of this process is clearly indicated by the fact that during 1951-1979 the fixed capital in the republic's industry increased 40-fold. Now Lithuania's industry every 6 days produces as much output as it did during the entire year of 1940. Whereas in the early 1950's the per-capita industrial output produced in our republic was approximately one-half the output throughout the country, now Lithuania slightly exceeds the average Union level in this indicator.

Now the republi.'s industry is represented by nearly all the basic branches of production. The lack of the most important minerals--metal ores and modern types of fuel resources--in the interior of the earth in the republic and, therefore, the great expenditures on their delivery were taken into account during the formation of the branch structure of industry. Branches in the forefront of scientific and technical progress hold the leading place in Lithuania's industry. The machine building and metalworking industry accounts for 25 percent of the total volume of industrial production. Radio engineering, electronic and chemical industries and instrument making--branches comparatively not very material intensive, but requiring considerable inputs of skilled labor--have become its specialized branches.

During the past years, for all practical purposes, the following were established anew and developed: modern power facilities, the chemical industry, the production of cement, industrial building elements and wood slabs and many other advanced industries. An incipient new branch--the petroleum refining industry--and atomic power engineering are of great importance for the national economic complex of our republic.

Along with the significant development of heavy industry branches, branches producing consumer goods retain an important place in the structure of the republic's industry. The traditional branches of our industry--light, food and meat and dairy branches--have been transformed beyond recognition and have become highly equipped technically. In essence, a large fishing base has been established anew and fish processing, ship building and ship repair enterprises have been built. The complex of food and light industry branches now produces up to 50 percent of the total volume of industrial output.

In the republic large capacities have been established and large-scale production of goods for cultural and general purposes and household use, that is, television sets, household refrigerators, tape recorders, furniture and so forth, has been organized.

The rapid growth of industrial branches led to fundamental changes in the social and economic structure of the republic's national economy and in the settlement and employment of the population. During the past 4 decades the industrial and production personnel increased ninefold. Whereas during the prewar period only 8 to 9 percent of the population was employed in Lithuania's industry, now the proportion of those employed in industry comprises almost 30 percent.

Socialism gave wide scope for the development of productive forces in agriculture and for the introduction of modern technology and scientific achievements into production and made it possible to successfully solve the problems of fundamental improvement in the living and working conditions of rural workers. The party's modern agrarian policy is the basis for the advances made in the development of agriculture. The decisions of the March (1965) and of subsequent plenums of the Central Committee and CPSU congresses were of decisive importance.

In the republic's agriculture modern machinery and equipment are used ever more widely and production processes are mechanized in an overall manner. Since about one-half of the agricultural land needed drainage, large-scale work on the construction of waterworks was and is being carried out. A total of 2.2 million hectares of water logged and swampy land, or more than 60 percent of its total area, have been reclaimed by closed drainage by now. It is remarkable that land reclamation is not only the construction of drainage systems, but also the implementation of a whole set of reclamation and other measures creating a firm basis for modern farming.

The implemented measures for the intensification of agricultural production and strengthening of kolkhoz and sovkhoz economy ensured a stable growth of output. Now the annual volume of gross agricultural output in Lithuania is more than twice as high as the volumes of prewar years, although under the bourgeois system almost three-fourths of the employed population worked in agriculture and now, less than one-fourth. During the 4 years of the current five-year plan, despite unfavorable weather conditions, the average annual yield of grain crops totaled 25 quintals per hectare, which is twice as much as during the best years under the bourgeois system.

Animal husbandry has become a highly productive branch of agriculture. Measures aimed at the strengthening of the fodder base, mechanization of production processes and establishment of a highly productive pedigree herd played the most important part in its development. The number of cattle and hogs exceeds similar indicators in Lithuania in 1940 more than twofold and of poultry, by a factor of 3.5 The productivity of animals is also growing. All this makes it possible to steadily increase the production of livestock products. An average of about 130 quintals of meat in carcass weight and 750 quintals of milk per 100 hectares of agricultural land were produced in the republic in 1979. Meanwhile, approximately one-third of this output was produced on the same land area in bourgeois Lithuania.

The increase in material and technical equipment and in the intensification of agricultural production and the need for its further buildup gave rise to new forms of organization of production--its specialization and concentration on the basis of interfarm cooperation and agroindustrial integration. This opens up wider possibilities for the unification of farm resources for the establishment of large specialized industrial-type enterprises using the most advanced technology and highly skilled labor.

The republic's modern transport system contributes to a successful development of productive forces. Under the conditions of a relatively small territory well-developed motor transport is of special importance. During the years of Soviet rule a great deal has been done to improve the republic's road network. The length of hard-surface motor roads increased from 2,200 km in 1940 to 21,400 km at present. One-third of these roads have an improved black surface. All kolkhozes and sovkhozes have regular bus communication with rayon centers and big cities. Railroad transport is also being modernized. Work on the electrification of the Vilnius Railroad Center has been carried out. The proportion of air transport in passenger communication is growing rapidly. All types of means of communication have been developed widely.

Along with the strengthening of the material and technical base of branches of the production sphere the entire nonproduction sphere has also changed beyond recognition in Soviet Lithuania. A vast program for the construction of housing, educational, public health, cultural, municipal and other facilities has been implemented in cities and rural areas during the years of Soviet rule, which has made it possible to solve important problems in the area of social development and contributed to the implementation of the policy of the Communist Party aimed at improving the people's well-being and the socialist way of life.

Summing up the results of 40 years of development of Soviet Lithuania, it can be stated that the high dynamism and major quantitative and profound qualitative changes in key economic branches and in the population's social structure made it possible to comparatively quickly solve such a very important socioeconomic and political problem as the republic's attainment of an average Union level of economic development, to establish a powerful production and scientific-technical potential and a modern production and social-general infrastructure of the national economy and to solve major problems of social development on the level of requirements of a developed socialist society.

Lithuania's workers observed the 40th anniversary of the restoration of Soviet power by implementing the program outlined by the 25th party congress and realizing the assignments of the concluding 10th Five-Year Plan. Workers in all national economic branches work intensely to fulfill the plans of the current year and of the entire 5-year period and to create the necessary basis for ensuring stable work during the first year of the 11th Five-Year Plan. The decisions of the June (1980) Plenum of the CPSU Central Committee, the tasks put forward in L. I. Brezhnev's report and the decree of the CPSU Central Committee on the development of socialist competition for an appropriate welcome to the 26th party congress direct us toward this.

Our country is on the threshold of the next 11th Five-Year Plan, which will be an important new stage in the development of its productive forces and in the further advance of the economy and the people's well-being. It will be also necessary to solve important problems in the Lithuanian SSR, that is, to continue to ensure a dynamic development of all the branches of the sphere of material production, making the maximum use of all potentials and opportunities.

The policy of a further systematic increase in the processes of intensification of public production is an integral part of the long-term economic strategy of the Communist Party. At the present stage in the development of the socialist economy the fullest and most efficient utilization of all production resources becomes the main way of attaining high production efficiency.

Constant work is being done in this direction in the Lithuanian SSR. The Central Committee of the Communist Party of Lithuania, party committees and Soviet and economic bodies make every effort to implement measures to ensure an increase in economic efficiency and to improve qualitative work parameters in all national economic units.

The task is to ensure further production growth mainly through an intensified use of the functioning fixed capital and production capacities and of labor, material and financial resources and an accelerated technical retooling of industry and other national economic branches, not through the creation of new jobs.

The problem of improving the use of labor resources takes on special importance. A very high level of the population's employment in the public sector (about 90 percent of the labor resources) has been attained in Lithuania. Therefore, the possibilities of involving additional manpower have almost been exhausted. The situation with respect to the redistribution of the population engaged in national labor is similar.

At the present stage it is a matter of the need to create the appropriate technical, economic, organizational and social prerequisites for an acceleration of the process of intensification and strengthening of the role of labor productivity in ensuring an increase in production. The republic's national economy is entering a stage of development where nearly the entire increase in production and, primarily, in industrial branches should be ensured through labor productivity growth.

This urgently requires an effective solution of the entire set of problems connected with a technical and organizational improvement in production and the realization of a vast program of social development.

A certain revision of some concepts and views of the processes occurring in the economy, as well as of management methods, is necessary. We see the main way of solving the problems facing us in this area in an accelerated introduction of the achievements of science and technology into the national economy and in a maximum utilization of the new opportunities arising on this basis.

Of great importance is the system of measures for improving planning and management established by the decree dated 12 July 1979 of the CPSU Central Committe and the USSR Council of Ministers "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality."

A program of actions aimed at an acceleration of scientific and technical progress, increase in its efficiency and strengthening of the integration of science and production is implemented systematically in the Lithuanian SSR. Problems of overall mechanization and automation of production and reduction in the number of workers engaged in various types of unproductive and here and there heavy manual labor are put in the forefront.

A number of measures aimed at raising the technical level of production and reducing the use of manual labor are implemented. For example, at the republic's industrial enterprises in 4 years of the current five-year plan more than 900 mechanized flow and automatic lines were put into operation, 300 shops and sections were mechanized in an overall manner and more than 1,000 units of automatic and semiautomatic equipment were installed. As a result, through a rise in the technical level of production more than 54,000 workers were disengaged and about 350 million rubles of annual savings were obtained. In the last few years the level of mechanization and automation of labor rose considerably, reaching 51 percent throughout industry at the beginning of 1980. The absolute number of workers engaged in manual labor is also reduced gradually. However, the complexity of the solution of such problems is due to a considerable degree to the fact that about 45 percent of all the workers in the republic's industry are employed in auxiliary operations, where manual labor predominates. If two-thirds of the basic workers are engaged in mechanized labor, the same number of auxiliary workers work in manual labor.

In order to better solve these burning problems, it is necessary to ensure an overall approach and there is a need for well-coordinated efforts of branch and territorial management bodies and for a profound interaction of science and production. To raise the level of mechanization and automation of industrial production, there is a need for systematic evaluations and an analysis of the technical state of production, developments and introduction of long-term economically substantiated plans for the technical retooling of existing enterprises and overall mechanization of loading-unloading, warehouse and transport operations and the manufacture of small-scale mechanization equipment, nonstandardized equipment and so forth. At the same time, centralized production of mechanization equipment, especially for auxiliary operations, should be expanded.

Problems of improvement in specialization and intensification of production concentration are very urgent. In the last few years the republic's party organization has attained a certain rise in the level of organizational and economic work and production concentration. At the same time, problems of intensification of specialization are not solved as successfully as the interests of the cause dictate.

The development of centralized production of products for interbranch use, such as castings, forgings, stampings, equipment accessories, metal cutting tools, industrial holders and fasteners, industrial packaging materials and implements, centralization of the repair of plant equipment and machinery and development of production of spare and rapidly wearing out parts for all types of equipment for mass use are of great importance for an acceleration of technical progress in the national economy and on this basis increase in the rates of labor productivity growth. Up to now the situation has been improving slowly.

Owing to the evelopment of centralized production of an interbranch nature, dozens of enterprises in the republic manufacture many types of these products with their own forces, which not only hampers technical progress, but also has a negative effect on the efficiency of basic production. At the enterprises of many branches of the machine building industry, basically, production is of a closed nature which leads to certain national economic losses. The scientific research and planning and design organizations of the USSR Ministry of Machine Tool and Tool Building Industry have worked out technical and economic proposals for the development of machine tool building enterprises located on the territory of the Lithuanian SSR during the 11th Five-Year Plan and the period until 1990. They draw special attention to measures for a centralized manufacture of structurally and technologically uniform parts, tools and other articles for general machine building use. This measure will give an economic effect of tens of millions of rubles on a republic scale alone.

The establishment of scientific production and production associations is one of the main trends in the rise in the scientific level of management and acceleration of technical progress.

The task of concluding in the next few years the formation of production associations as the basic cost accounting unit of industry was set in the party and government decisions on improving the economic mechanism. The process of their formation in the Lithuanian SSR has advanced considerably. Production associations now account for almost one-half of the industrial output. Their establishment contributed to a rise in the level of concentration and intensification of production specialization, improvement in production organization and a more efficient utilization of productive capital and manpower. In the republic there are many powerful production associations solving the problems of improvement in production efficiency at the proper level. However, the opportunities and potentials have not been exhausted at all.

Some Lithuanian associations are weak and are organized without the proper technical and economic substantiation and clear prospects for their development. Further work on improving the master plans for branch management will be needed. Unfortunately, when solving these problems, to this day it has not been possible to fully overcome the narrow departmental approach. The problem of redistribution of enterprises among ministries with due regard for specialization for the purpose of the most efficient utilization of economic and production relations and territorial distribution has not found a practical solution in the master plans. It is even difficult to cite an example of inclusion of enterprises of different subordination in the associations being established in the developed plans for the management of industrial branches. There were many sufficiently argued proposals in this direction. For example, it seems advisable to organize a scientific production association for the development and output of office equipment at the base of the Vilnius Scientific Research Institute of Electrography, the special design office equipment bureau in Vilnius and the Kaunas Experimental Automation Equipment Plant of the USSR Ministry of Instrument Making, Automation Equipment and Control Systems. To this day, however, this problem has remained unsolved.

In our opinion, the formation of associations that would include similar enterprises or production facilities, regardless of their departmental subordination, is necessary and promising. Such associations should be subordinated to the ministry or department in which a given item is specialized or final.

Problems of concentration of woodworking and timber sawing and the production of some building materials, reinforced concrete articles and other types of products, whose output is spread among many departments, are also urgent for our republic.

The possibilities for the further concentration of industrial production, consolidation of enterprises and establishment of powerful production and scientific production associations have by no means been exhausted. However, constructive proposals of scientific research organizations, more decisive actions of republic party and Soviet bodies and an interested attitude of Union ministries and departments are needed here.

Party and government decisions increase the responsibility of republics for the development and realization of major interbranch programs as one of the important elements of the content of overall territorial plans. Work on such general republic programs and their implementation is very complex and requires an efficient organization and concentration of the efforts of many ministries and departments, republic bodies, local soviets and scientific research institutions.

The republic's party organization lends an overall nature to the search for ways of increasing production efficiency, which intensifies the purposefulness of the measures taken. With due regard for the special importance of acceleration of the process of production intensification at the present stage an overall program for the intensification of industrial and building production in the Lithuanian SSR is developed in the republic. An overall search for and use of potentials and possibilities for ensuring stable rates of development of industrial and building production through an accelerated growth of labor productivity, an efficient distribution and utilization of labor and material resources and the most efficient technical and organizational improvement in production are the goals of the program. The overall program being prepared encompasses a wide range of technical-organizational and social problems affecting the end results of production. Specific measures aimed at raising the level of production intensification during the 11th Five-Year Plan are developed.

Specific work in this direction has already been done. Drafts of overall programs for intensification for the 11th Five-Year Plan have been developed according to a single methodology at every industrial enterprise and association and in all construction organizations, ministries and departments.

In the republic there is specific experience in the development and realization of overall programs. However, a program on such a scale is developed for the first time. Intensification programs lend a strict purposeful nature to the solution of the whole set of problems of intensification of industrial and building production and coordinate developments with the 11th Five-Year Plan. Thus, in addition to independent significance programs are very important preplan projects. We set ourselves the goal of having in the next few years overall intensification programs throughout the republic, as well as in ministries, departments, associations and enterprises, that is, preparing programs including fully specific measures in all links with an evaluation of their efficiency and final result. We hope that the appropriate Union ministries and departments will support the republic's initiative.

The attention of party and Soviet bodies is directed toward a search for ways of intensifying production, because in the localities it is possible to examine production more profoundly, to better see the existing problems and to concentrate efforts on the elimination of "bottlenecks" in production. The task of comprehensively examining the industrial development planned in a city or rayon and of fundamentally approaching the designs of associations and enterprises from the standpoint of statewide interests is set for party and Soviet bodies. Overall programs for the intensification of industrial production on a city or rayon scale can play an important part in this.

The development of such types of programs is new. Problems concerning the methodology of their preparation and organizational problems of implementation of overall programs have not yet been studied sufficiently.

The difficulties in the realization of the set of measures for production intensification are connected with overcoming the attempt by a number of ministries and departments, to the detriment of the technical retooling and modernization of enterprises, to attain an increase in capital investments for new construction with an enlistment of an additional number of workers. Under the conditions of a significant decline in the increase in labor resources, which, as is well known, exists in Lithuania, such a way is unacceptable. It can lead to serious difficulties in providing manpower for agricultural production and do damage to the overall development of the entire national economy.

Defining the most important scientific-technical and socioeconomic problems and concentrating forces and funds on their solution are indispensable conditions for raising the level of management of economic development at the present stage and for ensuring the necessary proportionality in the national economy. Problem orientation is becoming an ever more characteristic feature of the work of managerial personnel of all units. The decree of the CPSU Central Committee and the USSR Council of Ministers "On Improving Planning and Strengthening the Influence of the Economic Mechanism on Increasing Production Efficiency and Work Quality" created all the prerequisites necessary for a wide use of the program oriented method in the solution of major interbranch problems. Great significance is attached to these problems in the republic. The range of problems for whose solution it will be necessary to develop overall programs for the 11th Five-Year Plan and a more distant future has already been established and the basic organizational parameters of this complex work have been determined.

In particular, the development and realization of an overall program for improving socioeconomic living conditions in rural areas and retaining labor resources necessary for the further development of agricultural production are urgent for the Lithuanian SSR. It will also be necessary to prepare a program for the solution of another acute problem--reduction in manual labor in loading-unloading, transport and warehouse operations with a view to creating a single mechanized freight flow along the industry-transport-trade chain. Furthermore, the elaboration of a program for the development of a single transport system, increase in the efficiency of utilization of electric power and fuel in the national economy, improvement in the utilization and protection of water resources, reduction in the pollution of the air basin and so forth is envisaged.

A wide introduction of overall programs into planning and management should also contribute to a more efficient combination of branch and territorial interests. This, however, requires not only an active participation of republic management bodies, but also significant help on the part of Union branch ministries, especially in material and technical supply for overall programs for the problems in whose solution both the republic and branch are interested. The inclusion of sets of measures of the Union republics as subprograms in overall Union programs could be a means of better combining territorial and branch interests.

The use of the program oriented method in the practice of management is expanding. However, methodological problems concerning republic programs have hardly been reflected in the standard documents on the development of overall programs regulated by Union bodies, which hampers their use. Apparently, scientists who believe that the organizational forms of program management cannot be the same in all cases and that there is no need for their strict typification are right. However, information on advanced experience is certainly necessary. Meanwhile, the study, generalization and dissemination of the advanced experience of republics and the training of managers and specialists in the organization of the development of overall programs have not yet been organized properly. The USSR State Planning Committee and the USSR State Committee for Science and Technology must pay considerable attention to these problems.

Improvement in the planning of social development in the republic is considered a mandatory condition for the attainment of high production efficiency and work quality. It is carried out everywhere. During this five-year plan almost all labor collectives in industry, construction, agriculture and transport, most enterprises and organizations in communication and municipal facilities, some ministries and a number of cities and rayons have developed and are implementing plans for social development. Such work was also begun in the organizations of the nonproduction sphere.

The Republic Coordinating Council for Socioeconomic Planning manages social planning in the republic. An overall program for the development of social planning until 1985 has been prepared and is being realized and basic scientific research organizations, which will engage in the preparation of methodological data on the elaboration of plans for social development, as well as basic enterprises and organizations, which will have to test the methodological recommendations in practice, have been approved. Serious attention is given to an improvement in the skills of personnel and dissemination of advanced experience in the area of social planning. In particular, a republic review of the elaboration and implementation of plans for the social development of collectives was held not long ago.

Thus, the Lithuanian SSR accumulated specific experience sufficient for the preparation during the 11th Five-Year Plan at all the levels of planning of consolidated sections for the entire set of measures in the area of social development in accordance with the decree of the CPSU Central Committee and the USSR Council of Ministers on problems of improving planning and strengthening the influence of the economic mechanism on increasing production efficiency and work quality.

When working out consolidated sections of plans for social development, it is important to optimally coordinate territorial plans with the plans for labor collectives. As is well known, some social problems can be solved successfully on a labor collective scale and others on a city or rayon scale alone. However, there are no recommendations on such problems in the existing methodological data and literature on social planning and a creative search is needed here.

The success of the planning of social development depends to a great extent on the depth of knowledge of social phenomena. Enterprises, associations and ministries more and more acutely feel the need for sociological services or individual workers constantly engaged in the detection of the most acute social problems and ways of solving them. This requires skilled personnel. The party organization of the Lithuanian SSR does specific work on training them through improvement in skills. However, this is insufficient. The USSR Ministry of Higher Educational Institutions must search for opportunities to expand the training of sociologists of broad specialization.

We attach the same great importance to a significant improvement in the utilization of the republic's available scientific potential and to the strengthening of relations between science and production. In the last few years the Central Committee of the Communist Party of Lithuania and the Lithuanian SSR Council of Ministers have adopted a number of fundamental decisions aimed at increasing the efficiency of scientific research and an efficient utilization of scientific and technological achievements in the national economy. We consider the strenghtening of the coordination of scientific research and developments and improvement in its forms some of the organizational forms of integration of science and production. The Republic Commission on Scientific and Technical Progress--the coordinating body of the Central Committee of the Communist Party of Lithuania and the republic's Council of Ministers on the fundamental problems of the further overall development of science and technology--was established in 1979.

The republic faces important tasks in the area of increase in production efficiency. To accomplish them we will continue to increase the role of science and to strive for more fruitful relations between scientific organizations and ministries, departments, associations and enterprises and for an intensified trend of scientific research toward the realization of the most important present and future problems. At the same time, plans are made to greatly increase the contribution of the scientific research and planning design organizations of Union subordination located on the territory of our republic, whose research trend as yet has by no means always met modern requirements properly, to this cause. In particular, in the planning of the work of such organizations there are cases of an inefficient and unsubstantiated territorial attachment of some developments.

This article touches only on some problems connected with ensuring further economic growth through intensive factors. It seems to us that a better solution of these problems would contribute to an increase in economic efficiency and to a fuller realization of party and government measures aimed at improving the entire mechanism of management.

The further development of the branches of material production and nonproduction sphere of the Lithuanian SSR is predetermined by the rising power and increasing opportunities of the USSR and the fundamental trends in the economic policy of the CPSU. The achievements of Soviet Lithuania are the results of the constant concern and all-around assistance of the CPSU Central Committee and the Soviet Government, close cooperation and unity of all the nations of our country, persistent labor of the working class, kolkhoz peasantry and the people's intelligentsia and purposeful work of party, Soviet, trade-union and Komsomol organizations.

The new upsurge in the political and labor activity of production collectives and the general aspiration to attain high national economic end results are evidence of the unanimous approval by the workers of Soviet Lithuania of the domestic and foreign policy of the Communist Party of the Soviet Union. As L. I. Brezhnev stressed at a conference at the Central Committee of the Communist Party of Kazakhstan, "the task is to most efficiently utilize the patriotic enthusiasm of workers, kolkhoz members and the intelligentsia, which we have in the country now on the eve of the 26th party congress."[1] Following this instruction, the republic's party bodies and primary party organizations will actively support all the undertakings aimed at a better utilization of internal reserves. We consider this our main task. In response to the decisions of the July and October (1980) plenums of the CPSU Central Committee and L. I. Brezhnev's recommendations and instructions the party members and all workers of Soviet Lithuania are fully resolved to strive in the maximum possible way for an increase in the efficiency of public production and quality of all our work, to make an appropriate contribution to the accomplishment of the tasks resulting from the economic strategy of the party and to meet the 26th CPSU Congress with new achievements.

COPYRIGHT: Izdatel'stvo "Ekonomika", "Planovoye khozyaystvo", 1980

11,439
CSO: 1820

---

[1] PRAVDA, 29 August 1980.

REGIONAL DEVELOPMENT

CONFERENCE ON KIRGHIZ TERRITORIAL PRODUCTION COMPLEXES

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 11, Nov 80 pp 127-128

[Article by G. Kopanev, division chief of the Council for the Study of the Productive Forces of USSR Gosplan, Ye. Zharenkov, responsible secretary of the journal PLANOVOYE KHOZYAYSTVO, and A. Termechikov, director of the Scientific Research Institute of Economics and Planning Methodology of the Kirghiz SSSR Gosplan: "Problems of the Formation of Territorial Production Complexes in Kirghizia"]

[Text] An all-Union science-practical conference devoted to problems of forming the Issyk Kul'-Chu territorial production complex in the Kirgiz SSR was held in Frunze. It was organized by the Academy of Sciences USSR, the Commission for the Study of Productive Forces and Natural Resources of the presidium of the Academy of Sciences USSR, the Council for the Study of Productive Forces of USSR Gosplan, Kirghiz SSR Gosplan, and the Academy of Sciences Kirghiz SSR. Members and candidate members of the Bureau of the Central Committee of the Kirghiz Communist Party, representatives of scientific and planning bodies, and employees of a number of USSR and republic ministries and departments and scientific research and planning institutes participated in the work of the conference.

Academician A. V. Sidorenko, vice president of the Academy of Sciences USSR, opened the conference.

In his talk T. U. Usubaliyev, first secretary of the Central Committee of the Kirghiz Communist Party, observed that thanks to consistent implementation of the Leninist nationality policy, the Kirghiz people have made significant advances in development of the republic and its culture and raising the public standard of living during Soviet years under the direction of the CPSU and with the constant help of the peoples of the fraternal Union republic. The speaker noted that Kirghizia has enormous natural wealth that is still not being used, especially mineral raw materials, recreation, land, and water resources in the northeastern part of the republic. The formation of a territorial production complex in this region, T. U. Usubaliyev observed, is wise. Establishing such a complex would make it possible, first, to put the water and energy resources of the Sary-Dzhaz River in multiple use and achieve significant agricultural development on this basis, secondly, stabilize the level of Lake Issyk-Kul', and thirdly, developed mineral and raw material resources to the maximum degree. The comprehensive program for development of the Issyk Kul'-Chu region will be enormously important for the economy and socioeconomic development not just of the republic, but also the country as a whole.

The talks by A. D. Dzhumagulov (secretary of the Central Committee of the Kirghiz Communist Party) R. E. Sadykov (chief academic secretary of the Presidium of the Academy of Sciences Kirghiz SSR and corresponding members of the academy), and K. O. Otorbayev (academician of the Academy of Sciences Kirghiz SSR) set forth the content of the scientific research program, the scientific institutions being involved, and the challenges that face them. In their talks S. B. Begaliyev (chairman of Kirghiz SSSR Gosplan), doctor of economic sciences G. V. Kopanev (Council for the Study of Productive Forces of USSR Gosplan), and A. D. Termechikov (director of the Scientific Research Institute of Economics and Planning Methodology of Kirghiz SSSR Gosplan) noted the high level of development of productive forces in the republic, which afford a strong foundation for accomplishing major new economic tasks. They reviewed the principal lines of development and substantiated the economic efficiency of building a territorial production complex.

Representatives of the USSR ministries of Geology, Nonferrous Metallurgy, Power and Electrification, and Land Reclamation and Water Resources spoke at the conference. They described the mineral and raw material resources in the regions of the future territorial production complex and the prospects for geological exploration. Special attention was devoted to describing deposits of nonferrous metals.

The report by D. V. Alimov (vice president of the Academy of Sciences Kirghiz SSSR and academician of the academy) and K. B. Khuriyev (chief of the Naryngidroenergostroy [Naryn Hydro Power Construction] Administration) substantiated the possibility of using know-how in building hydroengineering and power facilities under mountainous conditions.

G. V. Voropayev, director of the Institute of Water Problems of the Academy of Sciences USSR and corresponding member of the academy, outlined the role of water resources in formation of the future territorial production complex. Specialists dealt in their talks with the problems of water consumption, the development of irrigation, characterization of principal water users, changes in the level of Lake Issyk-Kul', the consequences of a lowering of the lake level, and protecting the water resources of this region. The questions of the state of water resources in the region, plans for interbasin water transfers, and the hydroenergy resources of the Sary-Dzhaz and Aksay rivers were also discussed.

The conference conducted a thorough review of the questions of increasing agricultural production, the need to enlarge irrigated areas, specialization of agricultural production, and establishing large new orchard-farming, orchard and grape, and vegetable farms on new irrigated land.

These problems were discussed in the reports by A. S. Savitakhunov (Kirghiz SSSR minister of agriculture), K. T. Tynaliyev (deputy chairman of Kirghiz SSSR

Gosplan), R. B. Usmanov (Kirghiz SSR ministry of food industry), and A. U. Oruzbayev (director of the Kirghiz Scientific Research Institute of the Economics and Organization of Agricultural Production).

The talks considered also the questions of development of the Issyk-Kul' resort region and environmental protection. The role of the balneological thermal waters of the region and prospects for further development were emphasized.

Academician N. N. Nekrasov, chairman of the Commission for the Study of Productive Forces and Natural Resources of the Presidium of the Academy of Sciences USSR, spoke at the conference.

The work of the conference was summed up by academician A. V. Sidorenko, vice president of the Academy of Sciences USSR.

Participants at the conference adopted recommendations on problems of the formation and development of the Issyk Kul'-Chu territorial production complex.

COPYRIGHT: Izdatel'stvo "Ekonomika", "Planovoye khozyaystvo", 1980

11,176
CSO:1820

INTRODUCTION OF NEW TECHNOLOGY

FINANCIAL STIMULUS TO PROMOTE TECHNICAL PROGRESS CITED

Moscow EKONOMICHESKIYE NAUKI in Russian No 11, Nov 80 pp 108-109

[Article by Doctor of Economic Sciences, Prof T. Nazarov from the city of Dushanbe: "Financial and Credit Incentives for Accelerating Scientific and Technical Progress in Industry"]

[Text] In the range of measures to strengthen the impact of the economic mechanism on increasing production efficiency and work quality, a special place has been assigned to increasing the role of the economic (including financial and credit) levers and incentives, and to strengthening their effect on accelerating scientific and technical progress.

The solution to the given problem has a comprehensive nature. It encompasses the economic incentive systems for the association (enterprise) collectives as a whole and each individual worker, for the important factors in increasing production efficiency are: the collective interest in achieving the intensive growth factors, and the creation of conditions which encourage a growth of labor productivity, the technical reequipping of the enterprises, and the use of new equipment and advanced production methods.

At present, in our view, conditions have been created for the associations (enterprises) for strengthening the collective and individual material incentive primarily for current work. But in terms of introducing new equipment, there is a certain discrepancy between the economic interests of the individual enterprises and society as a whole. The development and introduction of new equipment demand additional outlays on the part of the enterprises, and they lead to a more complicated type of activities for the employees servicing the equipment, to a rise in the share of mental labor, and so forth. In terms of the conditions in a capitalist economy, K. Marx pointed out that "...the outlays which are required to run an enterprise which uses new inventions for the first time are always significantly greater than the outlays of later enterprises which arise on its ruins.... This aspect is so significant that pioneer entrepreneurs in their majority endure bankruptcy, and only their followers flourish who can acquire structures, machinery and so forth at cheaper prices.[1]

---

[1] K. Marx and F. Engels, "Soch." [Works], 2d Edition, Vol 25, Part I, p 116.

Since socialist enterprises operate on the basis of economic accountability, such additional expenditures in many instances are reflected on the current results of their operations, and cause a temporary decline in the profit growth rate, the level of profitability and a reduction in the deductions into the economic incentive funds. As a result the leaders of certain economic organizations have tended to reject measures relating to the development and introduction of new equipment in order to avoid the increased expenditures.

For eliminating these trends which run contrary to social interests, it is essential to compensate the enterprises for the outlays related to the development and introduction of new equipment and advanced production methods, and to create conditions which would provide greater profitability for the units which carry out these measures. It is essential, said Comrade L. I. Brezhnev at the 24th CPSU Congress, "...to create conditions which would force the enterprises to produce modern types of equipment, to literally seek out scientific and technical innovations, and not shy from them, to put it figuratively, like the devil from his reflection."[2] In creating such conditions, a prominent role is played by the financial and credit incentive methods. As yet they still are often ineffective and not sufficiently "sensitive" to the interests of both the producer of new equipment as well as its consumer. As practice shows, the fund for the development of new equipment is the main but not the exclusive source for financing expenditures on the technical reequipping of production. At the enterprises it has been used to finance only approximately one-half of the outlays on developing new equipment. The methods for compensating for the other half of these expenditures have been extremely diverse. Materials from a survey of the Tadzhik machine building and metalworking enterprises indicate that in certain instances such funds have been obtained from the fund for the development of new equipment, and in others from the centralized production development funds of the associations and ministries, and in still others, from bank credit and their own internal funds. The share of the development fund in the total expenditures on developing new equipment over a number of years (1975-1978) did not exceed 45 percent. At the same time, the money in the fund for the development of new equipment was also channeled into such purposes as covering expenditures on automating production, for the introduction of automatic control systems, and for other measures.

The setting up of a unified fund for scientific and technical development (YeFRNT) would help in solving many questions of financial support and material incentives for scientific and technical progress. As is known, the YeFRNT was first created in 1969 in the electrical engineering industry, and later it was extended also to certain other industrial sectors. As the acquired experience has shown, the YeFRNT has become the most reliable source of financing and material incentive for the "science--technology--production" cycle. Since this fund is formed from planned profit obtained as a result of the technical innovation, favorable conditions are created so that the money to develop the new equipment is perceived not as a subsidy, but rather as an attribute of economic accountability which has an active influence on the financial and economic activities of the associations (enterprises).

---

[2] "Materialy XXIV S"yezda KPSS" [Materials of the 24th CPSU Congress], Moscow, 1971, p 56.

The decree of the CPSU Central Committee and USSR Council of Ministers of 12 July 1979 provided that the YeFRNT would be created in the ministries and departments of all industrial sectors. The money of this fund was to be earmarked for financing scientific research, experimental design and engineering work and to compensate for expenditures related to the development and introduction of new types of products and production processes, to the introduction of the scientific organization of labor, as well as for covering expenditures to improve product quality and the increased outlays during the first years of producing a new product. The money of this fund was to be formed from deductions from planned profit of the scientific-production and production associations (enterprises).

It is essential to particularly emphasize the normative nature of the forming of the YeFRNT. The norm was to be set in a five-year plan (with an annual breakdown) in percent of the net (normed) product, and for individual sectors, in relation to the commodity product. In this manner stability of the money was to be provided for financing outlays on new equipment, the enterprises would be put under equal management conditions, and would have an opportunity to see the prospects of their development. As a result economic incentives and levers were put into operation for financial support of the temporary increased outlays on new equipment, and these created conditions for expanded reproduction, while the effectiveness of economic accountability was increased.

The decree of the CPSU Central Committee and USSR Council of Ministers of 12 July 1979, when necessary, made provision for the granting of credits by the USSR Gosbank and Stroybank to pay for work financed from the YeFRNT money.

In the overall system of economic incentives for production efficiency and for accelerating scientific and technical progress, a particular place is held by the questions of material incentives for the developers of new equipment. The solution to these questions requires the availability of a fund of money which can be used specifically to materially encourage employees in the sphere of scientific and technical progress. The bonus fund for employees for the creation and introduction of new equipment has not solved the given questions. While in industry the money to pay bonuses to employees for the creation and introduction of new equipment in 1970 was 4.2 percent in relation to the material incentive fund, in 1975 it had declined to 3.7 percent, and in 1976, to 2.9 percent. In 1977, the figure was 3.5 percent, and in 1978, 3.8 percent.[3] An analysis of the use of the money allocated to pay bonuses to employees for the creation and introduction of new equipment indicates that approximately 60-70 percent of the designated funds was used according to the proper purpose. Less than 20 percent of the employees of industrial enterprises (associations) received bonuses from the money of this fund. We feel that with the adjustment of the norms for forming economic incentive funds during the years of the 11th Five-Year Plan, the range of employees who receive bonuses from this source should be broadened in order to more fully cover all those who are involved in achieving high results in the intensification of production.

At the scientific-production and production associations, there is provision to use the YeFRNT to pay one-shot bonuses for the development, introduction and mass output of particularly important and highly efficient types of equipment and machinery, and for creating and developing fundamentally new production processes. These bonuses are to be paid to the leaders of the projects and to the workers who are directly involved in creating and developing them.

---

[3] See: "Narodnoye Khozyaystvo SSSR v 1978 g." [The Soviet National Economy in 1978], Moscow, 1979, p 530.

The encouraging of the end results from the creation and introduction of new equipment will be significantly aided by the presently established procedure of paying bonuses to the employees of scientific-production and production associations, scientific research, design and engineering organizations depending upon the total economic effect actually obtained in the national economy from utilizing scientific and technical achievements.

The skillful use of the financial-credit incentives and levers must become an important means for encouraging the enterprises and associations which are developing new equipment, as well as a means of material encouragement for the employees creating and introducing this equipment.

COPYRIGHT: Izdatel'stvo "Vysshaya shkola", "Ekonomicheskiye nauki", 1980

10272
CSO: 1820

END

END OF

FICHE

DATE FILMED

2/24/81